



CURRICULUM VITAE



| I. PERSONAL PARTICULARS | | | |
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| Name | PROF. MADYA DR. WAN YUSMAWATI BINTI WAN YUSOFF | | |
| Current Position Faculty / Department | LECTURER (DS54) PUSAT ASASI PERTAHANAN / PHYSICS DEPARTMENT | | |
| II. ACADEMIC AND PROFESSIONAL QUALIFICATIONS (Please list all academic qualifications, from your first degree, in chronological order) | | | |
| Year | Degree | Discipline | University |
| 1998-2001 | Bac. Sci (Hons) | Physics (Instrumentation Science) | Universiti Putra Malaysia |
| 2002-2005 | Master of Science | Applied Optics | Universiti Putra Malaysia Universiti Kebangsaan Malaysia |
| 2010-2014 | Ph.D | Microengineering and Nanoelectronics | |
| III. TITLES OF POSTGRADUATE THESES WRITTEN (At MSc/PhD Level) | | | |
| No. | TITLES OF POSTGRADUATE THESES | | |
| 1 | Pencirian Antarasambungan Pakej Mikroelektronik Terhadap Keadaan Sinaran Gamma Terlampau | | |
| 2 | Optical Properties and Kinetic Behaviour of Some Chemicals and Biological Species using Surface Plasmon Resonance Optical Sensor | | |

IV. WORK EXPERIENCE (Please list your relevant experience in chronological order)

| Year | Position | Organisation | Start and End Date |
|-------------|----------------------------|---|---------------------------|
| 2007 | Lecturer | Universiti Pertahanan Nasional Malaysia | June 2007 - Present |
| 2004 | Science Officer (Contract) | Universiti Putra Malaysia | July 2004 – June 2007 |
| 2002 | Tutor (Part Time) | Universiti Putra Malaysia | Mei 2002 – Nov 2004 |
| 2001 | Reasearch Assistant | Universiti Putra Malaysia | Nov 2001 – Mei 2002 |

1.0 TEACHING AND SUPERVISION**1.1 Postgraduate Courses**

(Please list in chronological order and state: course title, semester and year)

| No. | Course Title | Semester | Year |
|------------|----------------------|-----------------|-------------|
| 1 | Research Methodology | 1 | 2021/2022 |

1.2 First Degree Courses

(Please list in chronological order and state: course title, semester and year)

| No. | Course Title | Semester | Year |
|------------|---------------------|-----------------|-------------|
| | NIL | | |

1.3 Diploma Courses

(Please list in chronological order and state: course title, semester and year)

| No. | Course Title | Semester | Year |
|------------|---------------------|-----------------|-------------|
| | NIL | | |

1.4 Pre-Degree Courses

| No. | Course Title | Semester | Year |
|-----|--|----------|-----------------------|
| 1. | FPS 0113 Physics I FPS 0111 Physics Lab I | I | 2007/2008 |
| 2. | FPA 0223 Physics II FPA 0241 Physics Lab II | II | 2007/2008 |
| 3. | FPA 0223 Physics II (repeated student) | III | 2007/2008 |
| 4. | FPA 0113 Physics I FPA 0121 Physics Lab I | I | 2008/2009 – 2009/2010 |
| 5. | FPA 0233 Physics II FPA 0241 Physics Lab II | II | 2008/2009 – 2009/2010 |
| 6. | FPY 0316 Physics I | I | 2014/2015 – present |
| 7. | FPY 0326 Physics II | II | 2014/2015 – present |

1.5 PhD Supervision

| No. | Name of Student | Project Title | Date of Registration | Role (Main / Co-Supervision) | Status • Completed • Submitted • In Progress | University |
|-----|---------------------------------|---|----------------------|------------------------------|---|------------|
| 1. | Nur Arina binti Mat Rusni | Mechanical, Optical and Ionizing Radiation Properties of Bismuth Tellurite based Glass CeO ₂ /Tm ₂ O ₃ /Yb ₂ O ₃ | 11 July 2023 | Co-Supervisor | In-Progress | UPNM |

1.6 PhD External/Internal Examination

| No. | Name of Student | Project Title | External / Internal | Date of Viva | University |
|-----|-----------------|---------------|---------------------|--------------|------------|
| | NIL | | | | |

1.7 MSc (by Research)

| No. | Name of Student | Project Title | Date of Registration | Role (Main / Co-Supervision) | Status • Completed • Submitted • In Progress | University |
|-----|-----------------------------|---|----------------------|------------------------------|---|------------|
| 1. | Nur Shafiqah binti Safee | Effect of Blast Wave Toward Micromechanical and Physical Properties of Solder Joint | 1 Dec 2017 | Main Supervisor | Completed | UPNM |

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| 2. | Nur Farisa Nadia binti Mohmad Lehan | Micromechanical Properties and Microstructure Studies of Solder Interconnection in Exposure to Ionizing Radiation | 8 Sept 2020 | Main Supervisor | Completed | UPNM |
| 3. | Muhammad Nur Hisyam bin Rosman | Effect Of Ionizing On Physical And Micromechanical Properties Of Solder Joint | 18 Sep 2020 | Main Supervisor | In Progress (waiting for Viva) | UPNM |
| 4. | Abdullah Helmi bin Isahak | An Investigation to Characterization the Sandwich Metal Penal of Magnesium AZ31B and Roll Homogenous Armour Plate (RHA) Based on Crack Growth Under Impact Responses Technique | 11 Mac 2020 | Co-Supervisor | Completed | UPNM |
| 5. | Asyraf Hakimi bin Azmi | Fabrication Of Bismuth Oxyiodide Thin Film For Non-Toxic Perovskite Solar Cell | 2 Mac 2020 | Co-Supervisor | Completed | UPNM |
| 6. | Nor Falihan binti Ramli | Structural, Optical and Radiation Shielding Properties of Bismuth-Boro-Tellurite Glass Doped Thulium Oxide | 10 Mac 2021 | Co-Supervisor | In Progress (Viva 7 Mei 2024) | UPNM |

1.8 MSc External/Internal Examination

| No. | Name of Student | Project Title | External / Internal | Date of Viva | University |
|-----|-----------------|--|---------------------|--------------|------------|
| 1. | Aqeel bin Idrus | First Principles Study on Novel Cathode Material NaFeSO ₄ Oh For Sodium Ion Battery | Internal | 14 July 2020 | UPNM |

1.9 Supervision (Postgraduate Research Project or Final Year Research Project)

| No. | Name of Student | Project Title | Date of Registration | Role (Main/Co-Supervision) | Status • Completed • Submitted • In Progress |
|-----|-------------------------------|---|----------------------|----------------------------|---|
| 1. | PKdt Mohd Amirfaris bin Yazid | Vibro acoustic detection using reflected laser beam | 2010 | Co-supervisor | Completed |

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|-----|--|---|------|---------------|-------------|
| 2. | Saiful Adilin Ramli | Study of Fluorescent Lamps Conductivity for Radio Applications | 2014 | Co-supervisor | Completed |
| 3. | Mohamad Izhar Ayub | Implementation of Trigonometry Function using CORDIC Algorithm | 2014 | Co-supervisor | Completed |
| 4. | Jonnysius Singoi | Mechanical Properties of Natural Ceramic Composite made from CSM Coconut Fiber and Gypsum | 2014 | Co-supervisor | Completed |
| 5. | Nik Mohd Shahrul Nizam Azmi | Physical Properties of Natural Ceramic Composite made from CSM Coconut Fiber and Gypsum | 2014 | Co-supervisor | Completed |
| 6. | Muhammad Syafiq Kamarudin | Study on Mechanical and Structural Properties of Ternary Tellurite Glass Composite | 2015 | Co-supervisor | Completed |
| 7. | Normidatul Salwa Sobri | Micromechanical Properties and Microstructure Studies of Sn-0.3Ag0.5Cu Solder Joint in Exposure to Gamma Radiation | 2019 | Co-supervisor | Completed |
| 8. | Wan Nurzakirah binti Wan Jama Anasir | Microstructure & Micro Hardness Properties of Sn (Tin) Ag (Silver Cu (Copper) Solder Joint SAC0307 Under Blast Wave Condition with Different Surface Finish | 2020 | Co-supervisor | Completed |
| 9. | Pkdt Mohamad Tirmizi bin Suhaimi | Sistem Visual Analisis bagi Pengelasan Polariti <i>Coronavirus Tweet</i> | 2021 | Co-supervisor | Completed |
| 10. | Muhammad Alif Aisar bin Ab Aziz | Sistem Visualisasi Analisis Sentimen Bagi Pengelasan Penilaian Penggunaan Dadah dalam Ubat | 2021 | Co-supervisor | Completed |
| 11. | Nordiana binti Zulkifli | Sistem Peramalan Prestasi Akademik Pelajar | 2022 | Co-supervisor | In Prgress |
| 12. | Norfatin Firzana binti Mohd Salehuddin | Sistem Pengurusan Laporan Forensik Digital MCMC | 2022 | Co-supervisor | In Progress |

2.0 RESEARCH, PUBLICATION AND PRESENTATION

2.1 Research Projects

| No. | Title | List of Researchers • Principal • Members | Grant Year | Source Amount | Status • Completed • In Progress |
|-----|---|--|--|---|--|
| 1. | Mechanism Retardation of Intermetallic Compound Layer by Rare Earth-Lead Free Solder for Electronic Device in High Energy Radiation Environment | Principle R0156- FRGS/1/2023/ STG05/UPNM/ 02/01 | 1 Oct 2023 – 30 September 2026 | FRGS RM181,000.00 | In Progress |
| 2. | Localized Behaviour of Lead Free Solder Joint under Different Environment Exposure | Principle PS060- UPNM/2023/G PPP/SG/1 | 2 Oct 2023 – 31 Mac 2024 | GPPP RM21,000 | Completed |
| | Localized Behaviour of Lead Free Solder Joint under Different Environment Exposure | Principle UPNM/2023/G PPP/SG/1 | 1 April 2023 – 30 September 2023 | GPPP RM21,000 | Completed |
| 3. | Optimizing Electron Transport Layer (ETL) and Hole Transport Layer (HTL) for Flexible Lead-Free Perovskite Solar Cells | Member UPNM/2023/G PPP/SG/7 | 1 April 2023 – 31 Mac 2024 | GPPP RM21,600 | Completed |
| 4. | Study of Sn-Ag-Cu Solder Interconnection Behaviour under Gamma Radiation Exposure | Principle PS0053- UPNM/2022/G PPP/SG/17 | 1 Oct 2022 – 30 Sept 2023 | GPPP RM20,000 | Completed |
| 5. | Effect of Thulium Oxide on Optical Properties of Quaternary Tellurite Based Glass | Member UPNM/2022/G PJP/SG/3 | 30 Aug 2022 - 31 July 2024 | GPJP RM20,000 | In Progress |
| 6. | Theoretical Gamma Shielding Properties of Bismuth-Boro-Tellurite Glass Doped TM2O3/EU2O3 for Radiation Defense Material | Member UPNM/2019/G PJP/2/SG/6 | 1 Dec 2019 – 30 Nov 2021 | GPJP RM20,000 | Completed |
| 7. | Synthesis, characterization and fabrication of bismuth oxyiodide thin film for non-toxic perovskite solar cells | Member FRGS/1/2019/ STG07/UPNM/ 02/3 | 1 Sept 2019 – 31 Aug 2021 | FRGS RM108,200 | Completed |
| 8. | Atomic-level mechanism of interconnect materials for electronic packaging in exposure to ionizing radiation | Principle FRGS/1/2018/ STG07/UPNM/ 02/1 | 1 Jan 2019- 31 Dec 2020 | FRGS RM86,000 | Completed |
| 9. | Radiation-induced Synthesis of Polymer-Caged Liposome for Anticancer Drug Carrier Applications | Member GUP-2016-010 | 1 May 2016 – 30 April 2018 | Geran Penyelidikan UKM RM106,000 | Completed |
| 10. | Study of intermolecular interaction between carbon nanotubes and π -conjugated molecules for ultrafast optical switching | Member RAGS/1/2015/ SG0/UPNM/03 /1 | 1 Dec 2015 – 30 May 2018 | RAGS RM45,000 | Completed |
| 11. | Mekanisma gerakbalas bahan pakej mikroelektronik terhadap gelombang letupan | Principle FRGS/1/2015/ SG06/UPNM/0 3/1 | 1 Nov 2015 – 30 Oct 2017 | FRGS RM95,200 | Completed |

| No. | Title | List of Researchers • Principal • Members | Grant Year | Source Amount | Status • Completed • In Progress |
|-----|---|--|------------------------------------|-------------------|--|
| 12. | Electronic structure of metal oxide/organic semiconductor interface by optical second harmonic generation measurement | Member FRGS/1/2015/ SG02/UPNM/0 3/1 | 2 Nov 2015 – 30 April 2018 | FRGS RM116,000 | Completed |
| 13. | Gamma radiation resistance of new multicomposition tellurite glass doped Er/Ce rare earth ion | Principle FRGS/1/2013/ SG06/UPNM/0 3/1 | 1 May 2013 – 30 October 2015 | FRGS RM95,000 | Completed |
| 14. | A study of blast-wave propagation from free field and underground high explosive (HE) detonation | Member | May 2010- April 2012 | FRGS RM48500 | Completed |

2.2 Publications

2.2.1 Academic Journal

| No. | Authors, year, title, publisher/journal, volume and number of pages (Please bold your name) | Type of Journal • ISI • SCOPUS • Peer-Reviewed |
|-----|--|---|
| 1. | Norliza Ismail, Wan Yusmawati Wan Yusoff , Nor Azlian Abdul Manaf, Azuraida Amat, Nurazlin Ahmad, Eme Marina Salleh. 2024. A Review of Extreme Condition Effects on Solder Joint Reliability: Understanding Failure Mechanisms. Defence Technology (Article in Press) | ISI, Q1 |
| 2. | Norliza Ismail, Wan Yusmawati Wan Yusoff , Nor Azlian Abdul Manaf, Azuraida Amat, Nurazlin Ahmad, Eme Marina Salleh. 2024. A Comprehensive Review of Radiation Effects on Solder Alloys and Solder Joints. Defence Technology (Article in Press) | ISI, Q1 |
| 3. | Norliza Ismail, Wan Yusmawati Wan Yusoff , Nur Farisa Nadia Mohad Lehan, Nor Azlian Abdul Manaf, Azuraida Amat, Nurazlin Ahmad, Wilfred Paulus. 2024. Microstructural Evolution of 96.5Sn-3.0Ag-0.5Cu (SAC305) Solder Joints Induced by Variation Doses of Gamma-Irradiation. Journal of Materials Science: Materials in Electronics 35(1): 18. | ISI, Q2 |
| 4. | Hassan Al-Banna Mohamed, Ummul Fahri Abdul Rauf, Wan Yusmawati Wan Yusoff , Norzaura Abd Rahman. 2024. Cabaran Kelestarian dalam Pelaksanaan Piawaian Sistem Pengurusan Kualiti: Satu Pengalaman di Sebuah Unversiti Berfokus. Journal of Business and Social Development 12(1), 18-31. | Peer-Reviewed |
| 5. | Muhammad Nur Hisyam Rosman, Wan Yusmawati Wan Yusoff , Nor Azlian Abdul Manaf, Mohamad Faizal Abdullah, Che Azurhanim Che Abdullah. 2024. An Investigation of the Effect of Wide Range Gamma Radiation from Nanoindentation of the SAC305 Solder Alloy. Journal of Advanced Research in Micro and Nano Engineering 17 (1): 18-27. | SCOPUS |
| 6. | Muhammad Nur Hisyam Rosman, Wan Yusmawati Wan Yusoff , Nor Azlian Abdul Manaf, Mohamad Faizal Abdullah, Che Azurhanim Che Abdullah. 2023. Radiation-Induced Alterations in the Eutectic Microstructure and Hardness of Lead-Free Solder. Solid State Science and Technology Vol 31(1), 17-23. | Peer-Reviewed |
| 7. | Yusoff, W.Y.W. , Ismail, N., Lehan, N.F.N.M, Azuraida, A., Ahmad, K.Z.K., Jalar, A., Rahman, I.A. 2023. Micromechanical response of SAC305 solder alloy under gamma | ISI |

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| | radiation via nanindentation approach. Soldering and Surface Mount Technology Vol 35(1), 51-58. | |
| 8. | Nor Azlian Abdul Manaf, Asyraf Hakimi Azmi, Azuraida Amat, Wan Yusmawati Wan Yusoff , Salmiah Ibrahim, Fijay Fauzi. 2023. The Effect of Heat Treatment on Bismuth Oxyiodide Thin Films for Lead-Free Perovskite Solar Cells. JOM 75(3), 754-758. | ISI |
| 9. | Lehan N.F.N.M., Yusoff, W.Y.W. , Ku Ahmad, K.Z, Ismail, N., Azuraida, A., Abdullah, M.F, Jalar, A., Abdul Rahman, I & Salleh, E.M. 2022. Influence of Gamma Radiation on Eutectic Phase Area and Hardness Properties of SAC305 Solder. Jurnal Teknologi 84 (6-2), 113-118. | ISI |
| 10. | Lehan, N.F.N.M., Yusoff, W.Y.W. , Sobri, N.S., Ahmad, K.Z.K., Abdullah, M.F., Azuraida, A., Jalar, A. Rahman, I.A., Salleh, E.M. 2022. EDS analysis on effect of low dosage gamma radiation and micromechanical properties of SnAg ₃ Cu _{0.5} solder. Journal of Materials Science: Materials in Electronics 33(7), 4225-4236. | ISI |
| 11. | Falihan, R., Hasnimulyati, L., Abdul-Manaf, N.A., Yusoff, W.Y.W. , Azmi, A.H., Azuraida, A. 2022. Effect of Thulium Oxide on Structural, Reflective Index, and Optical Band Gap of Bismuth-Boro-Telurite Glass System. Chalcogenide Letters 19(10), 715-723 | ISI |
| 12. | Azuraida A., Nurshahidah O., Yusoff W.Y.W. , Falihan R., Abdul-Manaf N.A., Ahmad N. 2022. Effect of thulium boro-tellurite glass system on radiation shielding parameters. Journal of Ovonic Research 18(2), 141-148 | Scopus |
| 13. | Lehan, N.F.N.M, Yusoff, W.Y.W. , Ku Ahmad, K.Z, Abdullah, M.F, Amat, A., Ismail, N., Jalar, A., & Abdul Rahman, I. (2021). Correlation between Gamma Radiation Dose on Hardness, Thickness of Intermetallic Compound and Contact Angle. Solid State Science and Technology 29 (1&2), 40-46. | Peer-Reviewed |
| 14. | Nur Shafiq Safee, Wan Yusmawati Wan Yusoff , Ariffi Ismail, Norliza Ismail, Maria Abu Bakar, Azman Jalar. 2020. Solid State Phenomena 307, 31-36. | SCOPUS |
| 15. | Rahmat N.F., Wan Yusoff W.Y. , Jalar A., Azuraida A., Rahman I.A., Ibrahim N.S. 2021. Effect of Gamma Radiation on Micromechanical Behaviour of SAC305 solder. Solid State Phenomena 307;317:535-540. | SCOPUS |
| 16. | Muhammad Syukri M.M., Nurjahirah J., Mas Amira I., Yusoff, W.Y.W. , Victor Feizal K.V.E., Noor Azilah. 2021. Solid State Phenomena 317,263-269. | SCOPUS |
| 17. | Noor Fadhilah Rahmat, Wan Yusmawati Wan Yusoff , Nor Azlian Abdul Manaf, Azman Jalar, Nur Shafiq Safee, Azuraida Amat, Nurazlin Ahmad, Irman Abdul Rahman, Norliza Ismail and Najib Saedi Ibrahim. 2021. Effect of Gamma Radiation on Micromechanical Behavior of SnPb Solder Alloy. Zulfaqar Journal of Defence Science, Engineering & Technology. 4 (1), 45-50. | Peer-Reviewed |
| 18. | A.H. Isahak, M.F. Abdullah, M.K. Faidzi, W.Y.W. Yusoff , S. Abdullah, A.Ali, M.M.Mubasyir. 2021. A Study of Stress Behaviour and Energy Absorption for Sandwich Metal Penal Compared to Solid Material under Static Condition. Journal of Failure Analysis and Prevention 21(6), 2021-2028. | SCOPUS |
| 19. | Mohd Nor Faiz Norrrahim, Noor Azilah Mohd Kasim, Victor Feizal Knight, Muhammad Syukri Mohamad Misenan, Nurjahirah Janudin, Noor Aisyah Ahmad Shah, Herdawati Kasim, Wan Yusmawati Wan Yusoff , Siti Aminah Mohd Nor, Siti Hasnawati Jamal, Keat Khim Ong, Wan Md Zin Wan Yunus. 2021. Nanocellulose: a Bioadsorbent for Chemical Contaminant Remediation. RSC Advances 11(13), 7347-7368. | ISI |
| 20. | Norliza Ismail, Azman Jalar, Maria Abu Bakar, Nur Shafiq, Wan Yusmawati Wan Yusoff , Ariffin Ismail. 2021. Microstructural Evolution and Micromechanical Properties of SAC305/CNT/Cu Solder Joint under Blast Wave Condition. Soldering and Surface Mount Technology 33(1), 47-56. | ISI |
| 21. | Mohd Nor Faiz Norrrahim, Mas Amira Idayu Abdul Razak, Noor Aisyah Ahmad Shah, Herdawati Kasim, Wan Yusmawati Wan Yusoff , Norhana Abdul Halim, Siti Aminah Mohd Nor, Siti Hasnawati Jamal, Keat Khim Ong, Wan Md Zin Wan Yunus, Victor Feizal Knight, Noor Azilah Mohd Kasim. 2020. Recent developments on oximes to | ISI |

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| | improve the blood brain barrier penetration for the treatment of organophosphorus poisoning: a review. <i>RSC Advances</i> 10(8), 4465-4489. | |
| 22. | Norliza Ismail, Azman Jalar, Wan Yusmawati Wan Yusoff , Nur Shafiq Safee, Ariffin Ismail. 2020. Effect of Shock Wave on Constant Load Behaviour of Pb-free/CNT Solder Joint. <i>Sains Malaysiana</i> 49(12), 3037-3044. | ISI |
| 23. | Maria Abu Bakar, Azman Jalar, Wan Yusmawati Wan Yusoff , Nur Shafiq Safee, Ariffin Ismail, Najib Saedi Ibrahim. 2019. Effect of Shock wave on Micromechanical Properties of SAC 0307/EniG Solder Joint using Nanoindentation Approach Kesan Gelombang Kejut Ke Atas Sifat Mikromekanik Sambungan Pateri SAC 0307/ENiG Menggunakan Pendekatan Pelekukan Nano, <i>Sains Malaysiana</i> 48(6), 1273-1279 | ISI |
| 24. | N.A. Abdul-Manaf, W.Y.W. Yusoff , S.Z. Ngah Demon, N.A. Shaari, A. Shamshuddin, N.S. Mohamed. 2019. Anodic and cathodic deposition of polyaniline films: A comparison between the two methods. <i>Materials Research Express</i> 6(9), 096453. | ISI |
| 25. | W.Y.W. Yusoff , N. Ismail, N.S Safee, A, Ismail, A. Jalar, M. Abu Bakar, 2019. Correlation of Microstructural Evolution and Hardness Properties of Sn-0.3Ag-0.7Cu (SAC0307) Lead Free Solder Under Blast Wave Condition. <i>Soldering & Surface Mount Technology</i> 31(2), 102-108 | ISI |
| 26. | N.N.M. Fedzir, W.Y.W. Yusoff , A. Jalar. 2017. Effect of Substrate Pre-Soldering Temperature on Wettability of SAC287 Lead Free Solder. <i>Journal of Fundamental and Applied Science</i> . Vol. 9 Special Issue 3. <i>Journal of Fundamental and Applied Sciences</i> 9(3S), 154-166. | Peer-Reviewed |
| 27. | Wilfred Paulus, Irman Abdul Rahman, Azman Jalar, Roslina Ismail, Wan Yusmawati Wan Yusoff and Maria Abu Bakar. 2017. The Relationship between XRD Peak Intensity and Mechanical Properties of Irradiated Lead-Free Solder. <i>Materials Science Forum</i> 888: 423-427 | Scopus |
| 28. | Wan Yusmawati Wan Yusoff , Azman Jalar, Norinsan Kamil Othman & Irman Abdul Rahman. 2016. Nanoindentation Study on Heat Treated Gold Wire Bonding. <i>Materials Science Forum</i> 857, 31-35. | Scopus |
| 29. | Wan Yusmawati Wan Yusoff , Roslina Ismail, Azman Jalar, Norinsan Kamil Othman and Irman Abdul Rahman. 2014. Microstructural evolution and micromechanical properties of gamma-irradiated Au ball bonds. <i>Materials Characterization</i> 93: 129-135 (ISI Q1: 1.88). | ISI |
| 30. | Foo Siew Peng, Wan Yusmawati Wan Yusoff and Azman Jalar. 2014. Dimensional and structural stability of gamma irradiated stacked die Quad Flat No Leads (QFN). <i>Sains Malaysiana</i> 43(6):827-832. | ISI |
| 31. | M.S. Abdul Aziz, M.Z. Abdullah, C.Y. Khor, A. Jalar, M.A. Bakar, W.Y.W. Yusoff , F. Che Ani, N. Yan, M. Zhou, C. Cheok. 2014. Implications of adjustable fountain wave in pin through hole soldering process. <i>Arab J Sci Eng.</i> 39 (12): 9101-9111. | ISI |
| 32. | Azman Jalar, Wan Yusmawati Wan Yusoff , Norinsan Kamil Othman, Irman Abdul Rahman, 2014. High Temperature Storage and Gamma Radiation effects on Mechanical. <i>Advanced Materials Research</i> , 895: 567-570. | Scopus |
| 33. | Azman Jalar, Wan Yusmawati Wan Yusoff , Norinsan Kamil Othman, Shahrum Abdullah, Irman Abdul Rahman, 2012. Gamma Irradiation Effect on Load-deflection Curve of Semiconductor Package. <i>Advanced Materials Research</i> , Vols. 399-401: 912-915. | Scopus |
| 34. | Wan Yusmawati Wan Yusoff , Azman Jalar, Norinsan Kamil Othman and Irman Abdul Rahman. 2011. Effect of Gamma-irradiation towards Stress-strain Curve of Single Die QFN Package. <i>Materials Science Forum</i> , Vol. 694: 620-624. | Scopus |
| 35. | W.Y.W. Yusmawati and W. Mahmood Mat Yunus. 2007. Optical Properties and Kinetic Behavior of Chlorine in Pure Water and Swimming Pool Water using Surface Plasmon Resonance Technique. <i>Am. J. Applied Sci.</i> , 4(12):1024-1028. | Scopus |
| 36. | W.Y.W. Yusmawati , H.P. Chuah and M.Y.W. Mahmood. 2007. Optical Properties and Sugar Content Determination of Commercial Carbonated Drinks using Surface | Scopus |

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| | Plasmon Resonance. <i>Am. J. Applied Sci.</i> , 4(1):01-04 | |
| 37. | A.K. Saliana, M.Y.W. Mahmood, A.W. Zaidan, K. Anuar, M.N. Norkamizah, L.Y.C. Josephine and W.Y.W. Yusmawati . 2007. Thermal and Carrier Transport Properties of Ag/Si Silicides Compound Prepared on p-type Si Substrate. <i>J. Solid St. Sci. and Technol. Letters, Vol 14, No 1</i> : 105-112 (2007). | Peer-Reviewed |
| 38. | Wan Yusmawati Wan Yusoff , W. Mahmood Mat Yunus, Khatijah Yusoff, Mohd Maarof Moxsin and Zainal Abidin Talib. 2005. Surface Plasmon Resonance Optical Sensor for Detection of DNA Solution. <i>J. Solid St. Sci. and Technol. Letters, Vol 12, No 1&2</i> : 407-413. | Peer-Reviewed |
| 39. | Wan Yusmawati Wan Yusoff , W. Mahmood Mat Yunus, Mohd Maarof Moxsin and Zainal Abidin Talib. 2005. Determination of Chlorine in Water and Swimming Pool using Surface Plasmon Resonance Optical Sensor". <i>J. Solid St. Sci. and Technol. Letters, Vol 12, No 1&2</i> : 338-346. | Peer-Reviewed |
| 40. | Wan Yusmawati Wan Yusoff and W. Mahmood Mat Yunus. 2003. Thermal Diffusivity Measurement of Abrasive Paper using Photoacoustic Technique. <i>Pertanika J. Sci. & Technol.</i> 11(2): 301-309. | Peer-Reviewed |
| 41. | Wan Yusmawati Wan Yusoff , W. Mahmood Mat Yunus, Chia Pei Fung and Rosyaini Afindi Zaman. 2003. Thermal Diffusivity Measurement of Malaysian Hardwood using Photoflash Technique. <i>Sains Malaysiana</i> 33(2): 169-174. | Peer-Reviewed |

2.2.2 Book/Chapter in Book:

| No. | Authors, year, title, publisher, volume and number of pages (Please bold your name) | Level <ul style="list-style-type: none"> • International • National • University |
|-----|---|---|
| 1. | Abqari Luthfi Albert Abdullah, Azuraida Amat, Fadhlina Che Ros, Fadhlul Wafi Badrudin, Fauziah Abdul Aziz, Muhd Zu Azhan Yahya, Noor Fadhilah Rahmat, Nor Azlian Abdul Manaf, Norhana Abdul Halim, Noriza Ahmad Zabidi, Nurazlin Ahmad, Nurshahidah Osman, Nurul Hazwani Aminuddin Rosli, Shahrul Izawan Ahmad, Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff . 2024. Physics II for Defence Foundation Studies, UPM 2023/2024. Tenth Edition. | University |
| 2. | Norfatin Firzana Mohd Salehuddin, Siti Rohaidah Ahmad, Wan Yusmawati Wan Yusoff , Yuhanim Hani Yahaya, Siti Hajar Zainal Rashid. Chapter 38 Student Academic Performance Prediction System by using Decision Tree. APS Proceedings Vol 4 (2023), 268-275. | International |
| 3. | Nordiana Zulkifli, Siti Rohaidah Ahmad, Wan Yusmawati Wan Yusoff , Arniyati Ahmad, Mohd Fahmi Mohamad Amran. Chapter 52 Digital Forensics Report Management System for MCMC (DFRMS-MCMC), APS Proceedings Vol 4 (2023), 371-381. | International |
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| 5. | Fadhlina Che Ros, Wan Yusmawati Wan Yusoff , Siti Zulaikha Ngah Demon, Nor Azlian Abdul Manaf, Azuraida Amat, Nurul Hazwani Aminuddin Rosli, Noor Fadhilah Rahmat, Fadhlul Wafi Badrudin, Shahrul Izwan Ahmad, Norhana Abdul Halim, Fauziah Abdul Aziz, Muhd Zu Azhan Yahya, Nurazlin Ahmad, Abqari Luthfi Albert Abdullah, Noriza Ahmad Zabidi, Nurshahidah Osman, 2023. Physics II for Defence | University |

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| | Foundation Studies, UPNM 2022/2023. Ninth Edition. | |
| 6. | Abqari Luthfi Albert Abdullah, Azuraida Amat, Fadhlina Che Ros, Fadhul Wafi Badrudin, Fauziah Abdul Aziz, Muhd Zu Azhan Yahya, Nor Azlian Abdul Manaf, Norhana Abdul Halim, Noriza Ahmad Zabidi, Noor Fadhilah Rahmat, Nurazlin Ahmad, Nurshahidah Osman, Nurul Hazwani Aminuddin Rosli, Shahrul Izawan Ahmad, Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff . 2022. Physics I for Defence Foundation Studies, UPNM 2022/2023. Tenth Edition. | University |
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| 9. | Norherdawati Kasim, Norhana Abdul Halim, Fadhul Wafi Badrudin, Ahmad Farid Mohd Azmi, Azuraida Amat, Jahwarhar Izuan Abdul Rashid, Noor Aisyah Ahmad Shah, Noor Azilah Mohd Kasim, Noor Fadhilah Rahmat, Nor Azlian Abdul Manaf, Norli Abdullah, Safura Taufik, Siti Hasnawati Jamal, Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff , 2020. Kompilasi Ujikaji Sains Sekolah Rendah dan Menengah, Penerbit UPNM | National |
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| 11. | Azuraida Amat, Fadhlina Che Ros, Fadhul Wafi Badrudin, Fauziah Abdul Aziz, Muhd Zu Azhan Yahya, Nor Azlian Abdul Manaf, Norhana Abdul Halim, Noriza Ahmad Zabidi, Noor Fadhilah Rahmat, Nurazlin Ahmad, Nurshahidah Osman, Nurul Hazwani Aminuddin Rosli, SHahrul Izawan Ahmad, Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff . 2020. Physics I for Defence Foundation Studies, UPNM 2020/2021. Eighth Edition. | University |
| 12. | Fadhlina Che Ros, Wan Yusmawati Wan Yusoff , Siti Zulaikha Ngah Demon, Nor Azlian Abdul Manaf, Azuraida Amat, Nurul Hazwani Aminuddin Rosli, Noor Fadhilah Rahmat, Fadhul Wafi Badrudin, Shahrul Izwan Ahmad, Norhana Abdul Halim, Fauziah Abdul Aziz, Muhd Zu Azhan Yahya, Nurazlin Ahmad, Abqari Luthfi Albert Abdullah, Noriza Ahmad Zabidi, Nurshahidah Osman, 2018. Physics II for Defence Foundation Studies, UPNM 2018/2019. Sixth Edition. | University |
| 13. | Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff , Norhana Abdul Halim, Fadhlina Che Ros, Noriza Ahmad Zabidi, Nor Azlian Abdul Manaf, Azuraida Amat, Nurazlin Ahmad, Abqari Luthfi Albert Abdullah, Nurshahidah Osman, Shahrul Izwan Ahmad, Nurul Hazwani Aminuddin Rosli, Noor Fadhilah Rahmat, Fadhul Wafi Badrudin, 2018. Laboratory Manual Physics II | University |
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| 15. | Laboratory Manual Physics I Session 2018/2019 | University |
| 16. | Nor Azlian Abdul Manaf, Siti Zulaikha Ngah Demon, Fadhlina Che Ros, Nurul Hazwani Aminuddin Rosli, Azuraida Amat, , Shahrul Izwan Ahmad, Noor Fadhilah Rahmat, Fadhlu Wafi Badrudin, Noriza Ahmad Zabidi, Nurazlin Ahmad, Nurshahidah Osman, Norhana Abdul Halim, Wan Yusmawati Wan Yusoff , Fauziah Abdul Aziz, Muhd Zu Azhan Yahya. 2017. Module Physics II for Defence Foundation Studies. Fifth Edition. | University |
| 17. | Wan Yusmawati Wan Yusoff , Norhana Abdul Halim, Siti Zulaikha Ngah Demon, Fadhlina Che Ros, Noriza Ahmad Zabidi, Nor Azlian Abdul Manaf, Fadhlu Wafi Badrudin, Azuraida Amat, Shahrul Izwan Ahmad, Nurul Hazwani Aminuddin Rosli, Noor Fadhilah Rahmat, Nurazlin Ahmad, Nurshahidah Osman, Albert Abqari Luthfi Abdullah. 2017. Laboratory Manual Physics II | University |
| 18. | Azuraida Amat, Fadhlina Che Ros, Fadhlu Wafi Badrudin, Fauziah Abdul Aziz, Muhd Zu Azhan Yahya, Nor Azlian Abdul Manaf, Norhana Abdul Halim, Noriza Ahmad Zabidi, Noor Fadhilah Rahmat, Nurazlin Ahmad, Nurshahidah Osman, Nurul Hazwani Aminuddin Rosli, Shahrul Izwan Ahmad, Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff . 2017. Physics I for Defence Foundation. Fifth Edition | University |
| 19. | Laboratory Manual Physics I Session 2017/2018 | University |
| 20. | Norhana Abdul Halim, Fadhlina Che Ros, Nurul Hazwani Aminuddin Rosli, Nor Azlian Abdul Manaf, Wan Yusmawati Wan Yusoff , Noor Fadhilah Rahmat, Siti Zulaikha Ngah Demon, Noriza Ahmad Zabidi, Shahrul Izwan Ahmad, 2016. Physics II for Defence Foundation. Fourth Edition | University |
| 21. | Wan Yusmawati Wan Yusoff , Norhana Abdul Halim, Siti Zulaikha Ngah Demon, Fadhlina Che Ros, Noriza Ahmad Zabidi, Nor Azlian Abdul Manaf, Fadhlu Wafi Badrudin, Azuraida Amat, Shahrul Izwan Ahmad, Nurul Hazwani Aminuddin Rosli, Noor Fadhilah Rahmat, Nurazlin Ahmad, Nurshahidah Osman, Albert Abqari Luthfi Abdullah. 2016. Laboratory Manual Physics II | University |
| 22. | Azuraida Amat, Fadhlina Che Ros, Fauziah Abdul Aziz, Nor Azlian Abdul Manaf, Norhana Abdul Halim, Noriza Ahmad Zabidi, Noor Fadhilah Rahmat, Nurazlin Ahmad, Nurshahidah Osman, Nurul Hazwani Aminuddin Rosli, Shahrul Izwan Ahmad, Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff . 2016. <i>Physics I for Defence Foundation. Fourth Edition</i> | University |
| 23. | <i>Laboratory Manual Physics I Session 2016/2017</i> | University |
| 24. | Norhana Abdul Halim, Noriza Ahmad Zabidi, Wan Yusmawati Wan Yusoff , Shahrul Izwan Ahmad, Nurul Hazwani Aminuddin Rosli, Fadhlina Che Ros, Noor Fadhilah Rahmat, Siti Zulaikha Ngah Demon, 2015. Physics II for the Defence Foundation. Third Edition. | University |
| 25. | <i>Laboratory Manual Physics II Session 2015/2016</i> | University |
| 26. | Norhana Abdul Halim, Noriza Ahmad Zabidi, Wan Yusmawati Wan Yusoff , Shahrul Izwan Ahmad, Nurul Hazwani Aminuddin Rosli, Fadhlina Che Ros, Noor Fadhilah Rahmat, Siti Zulaikha Ngah Demon, 2015. Physics I for the Defence Foundation. Third Edition. | University |
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| 28. | Nurazlin Ahmad, Noriza Ahmad Zabidi, Abqari Luthfi Albert Abdullah, Azuraida Amat, Nurshahidah Osman, Wan Yusmawati Wan Yusoff , Siti Zulaikha Ngah Demon, Noor Fadhilah Rahmat, Nurul Hazwani Aminuddin Rosli, Shahrul Izwan Ahmad, 2014. <i>Laboratory Manual of Physics II (FPY 0326)</i> . | University |

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| 29. | Fauziah Abdul Aziz, Norhana Abdul Halim, Noriza Ahmad Zabidi, Nurazlin Ahmad, Abqari Luthfi Albert Abdullah, Azuraida Amat, Nurshahidah Osman, Wan Yusmawati Wan Yusoff , Noor Fadhilah Rahmat, Nurul Hazwani Aminuddin Rosli, Shahrul Izwan Ahmad, 2013. <i>Module of Physics I (FPY 0316)</i> . | University |
| 30. | Nurazlin Ahmad, Noriza Ahmad Zabidi, Abqari Luthfi Albert Abdullah, Azuraida Amat, Nurshahidah Osman, Wan Yusmawati Wan Yusoff , Siti Zulaikha Ngah Demon, Noor Fadhilah Rahmat, Nurul Hazwani Aminuddin Rosli, Shahrul Izwan Ahmad, 2013. <i>Laboratory Manual of Physics I (FPY 0316)</i> . | University |
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| 33. | Azuraida Amat, Nurazlin Ahmad, Nurshahidah Osman, Wan Yusmawati Wan Yusoff , Siti Zulaikha Ngah Demon, 2013. <i>Laboratory Manual of Physics II (FPY 0326)</i> . | University |
| 34. | Azuraida Amat, Nurazlin Ahmad, Nurshahidah Osman, Wan Yusmawati Wan Yusoff , Siti Zulaikha Ngah Demon, 2013. <i>Laboratory Manual of Physics I (FPY 0316)</i> . | University |
| 35. | Nurazlin Ahmad, Azuraida Amat, Nurshahidah Osman, Wan Yusmawati Wan Yusoff , Siti Zulaikha Ngah Demon, 2012. <i>Module of FPY 0326 (Physics 2)</i> , UPNM, Second Edition. (ISBN 978-967-5985-14-0) | University |
| 36. | Azuraida Amat, Nurazlin Ahmad, Nurshahidah Osman, Wan Yusmawati Wan Yusoff , Siti Zulaikha Ngah Demon, 2012. <i>Module of FPY 0316 (Physics 1)</i> , UPNM, Second Edition. (ISBN 978-967-5985-13-3) | University |

2.2.3 Proceeding Articles :

| No. | Authors, year, title, publisher/conference, volume and number of pages (Please bold your name) | Level <ul style="list-style-type: none"> • International • National • University |
|-----|---|---|
| 1. | W.Y.W. Yusoff , N.F.N.M. Lehan, N.S. Sobri, K.Z.K. Ahmad, A. Jalar, I.A. Rahman. 2021. Influences of Low Dose Gamma Radiation on Hardness and Microstructure Properties of Green Solder Joint. <i>Journal of Physics: Conference Series</i> 1816(1), 012118. | International |
| 2. | N.S. Safee, W.Y.W. Yusoff , A. Ismail, N. Ismail, E.M. Salleh, M.A. Bakar, A. Jalar. 2018. Shock wave effect on micromechanics properties of Sn-Ag-Cu solder (SAC 387) via nanoindentation. <i>IOP Conf. Series: Materials Science and Engineering</i> 409(1), 012013 (Scopus) | International |
| 3. | W.Y.W. Yusoff , N.S. Safee, A. Ismail, M.A. Bakar, A. Jalar. 2018. Micromechanical Properties of Solder Joint Towards Air Blast Exposure. <i>Journal of Physics: Conf. Series</i> 1083(1), 012064 (Scopus) | International |
| 4. | M.S. Abdul Aziz, M.Z. Abdullah, C.Y. Khor, A. Jalar, M.A. Bakar, W.Y.W. Yusoff , F. Che Ani, N. Yan, M. Zhou, C. Cheok. 2015. Effects of PCB thickness on adjustable fountain wave soldering. <i>Sadhana</i> Vol 4, Part 7: 2197-2220 (Scopus) | International |
| 5. | Wilfred Paulus, Irman Abdul Rahman, Azman Jalar, Insan Kamil, Wan Yusmawati Wan Yusoff and Maria Abu Bakar. 2015. Effect of gamma radiation on micromechanical hardness of lead free solder joint. <i>AIP Conference Proceeding</i> 1678, 040018 (Scopus) | International |
| 6. | Wan Yusmawati Wan Yusoff , Azman Jalar, Norinsan Kamil Othman & Irman Abdul Rahman. 2014. Effects of thermal cycling on the mechanical properties of gold wire | International |

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| | bonding. IEEE International Conference of Semiconductor Electronics (ICSE 2014) Proceeding: 521-524 (Scopus) | |
| 7. | Wan Yusmawati Wan Yusoff , Azman Jalar, Norinsan Kamil Othman, Irman Abdul Rahman. 2013. Gamma-irradiation effect on material properties behaviour of semiconductor package. AIP Conference Proceeding 1528: 300-305 (Scopus). | International |
| 8. | Wan Yusmawati Wan Yusoff , Azman Jalar, Norinsan Kamil Othman & Irman Abdul Rahman. 2012. Radiation exposure induced failure on semiconductor package material. IEEE International Conference of Semiconductor Electronics (ICSE 2012) Proceeding: 604-607 (Scopus). | International |
| 9. | W.Y. Wan Yusoff , A. Jalar, N.K. Othman and I. Abdul Rahman. 2011. Effect of Gamma-irradiation towards Stress-strain Curve of Single Die QFN Package. International Conference on Frontier of Nanoscience and Technology (ICFNST 2011): 1810-1819. | International |
| 10. | Balachandran, R., Yow, H.K., Jayachandran, Wan Yusmawati Wan Yusof and Saaminathan, V. 2006. Particle Size Analysis of Barium Titanate Powder by Slow-Rate Sol-Gel Process Route. International Conference (ICSE2006) Proceeding: 406-409. | International |
| 11. | Wan Yusmawati Wan Yusoff , W. Mahmood Mat Yunus, Zainal Abidin Talib, 2004. Kinetic Study of Mono and Disaccharides by Surface Plasmon Resonance Optical Sensor. <i>Prosiding Seminar Kebangsaan Sains Teknologi dan Sains Sosial 2004</i> : 13-19. | National |
| 12. | Wan Yusmawati Wan Yusoff , W. Mahmood Mat Yunus, Mohd Maarof Moxsin and Zainal Abidin Talib, 2004. Surface Plasmon Resonance Optical Sensor for Detection of Chlorine in Swimming Pool. <i>Proceeding of 6th Putra Seminar</i> : 56-62. | University |
| 13. | Yap Siew Hong, W. Mahmood Mat Yunus, Mohd Maarof Moxsin, Zainal Abidin Talib, Wan Yusmawati Wan Yusoff , Josephine Liew Ying Chyi, Rosyaini Afindi Zaman and Noor Haslinda Daud, 2004. Surface Microstructure and Carrier Transport Properties of Au/n-Si and Au/p-Si using Open Photoacoustic Technique. <i>Proceeding 12th Scientific Conference & 13th General Meeting Electron Microscopy Society of Malaysia</i> : 60-68. | National |
| 14. | Wan Yusmawati Wan Yusoff , W. Mahmood Mat Yunus, Mohd. Maarof Moxsin and Zainal Abidin Talib, 2003. Surface Plasmon Resonance Optical Sensor for Detection of Disaccharide in Water. <i>Proceedings of 5th Putra Physics Seminar</i> : 283-288. | University |

2.3 Presentation:

| No. | Event | Title of Paper Presented | Role (Keynote Speaker / Invited Speaker / Presenter) | Date | Organizer |
|-----|--|---|--|--|-------------------------------------|
| 1. | 2 nd International Conference on Energy & Environmental Materials (INCEEM-2023) | SnAg ₃ Cu _{0.5} Solder Response To Gamma Radiation Environment: IMC Layer, XRD Characteristic And Hardness Behavior | Invited Speaker | 6-9 th Dec 2023 (Online) | Sharda University, India |
| 2. | 9 th International Conference on Solid State Science and Technology (ICSSST 2023) | Radiation-Induced Alterations in SnAg ₃ Cu _{0.5} Solder Joint | Speaker | 7-9 th December 2023 (Hybrid) | Universiti Malaysia Sabah, Malaysia |
| 3. | Securing FRGS Grant: Sharing Session by Pre- | Securing FRGS Grant | Invited Speaker | 22 th Nov 2023 | Universiti Malaysia |

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| | University Researchers | | | | Sarawak, Malaysia |
| 4. | Bengkel Pematapan Kemahiran Penulisan Akademia Fakulti Perubatan dan Kesihatan (FPKP) | Preparation Competitive FRGS Research Proposal | Invited Speaker | 25 – 26 September 2023 | FPKP, UPNM |
| 5. | 2 nd International Conference on Science Education and Science (ICES 2022) | SnAgCu Solder Interconnection Behaviour under Gamma Exposure | Keynote Speaker | 3-4 November 2022 | Universitas Mataram |
| 6. | 8 th International Conference on Solid State Science and Technology (ICSSST2021) | Influence of Gamma Radiation Exposure Towards Hardness, Intermetallic Compound and The Area of Eutectic Phase of Solder Joint | Invited Speaker | 1-3 November 2021 | UiTM Perlis |
| 7. | 1 st International Conference Science Physics and Education (1 st ICSPPE) | EDS Analysis on Effect of Low Dosage Gamma Radiation and Micromechanical Properties of SnAg ₃ Cu _{0.5} Solder | Invited Speaker | 10-11 September 2021 | Lombok, Indonesia |
| 8. | 7 th International Conference on Solid State Science and Technology (ICSSST2019) | The Effect of Blast Exposure Distance on Hardness and Reduced Modulus Properties of Lead-Free Solder | Invited Speaker | 11-13 November 2019 | UPNM |
| 9. | Research Environment Among Departments (READ) | Metallography Preparation Technique in Microelectronics Package Research | Presenter | 26 July 2019 | PAP, UPNM |
| 10. | 30 th Regional Conference on Solid State Science and Technology (RCSSST2018) | Effect of Blast Wave on Intermetallics Formation, Hardness and Reduced Modulus Properties of Green Solder Joints | Invited Speaker | 6-8 November 2018 | USIM |
| 11. | 6 th International Conference on Solid State Science and Technology (ICSSST2017) | Micromechanical Properties of Solder Joint Towards Air Blast Exposure | Invited Speaker | 13-16 November 2017 | USM |
| 12. | Program Transformasi Minda Bil 1, 2017 UPNM | Pengurusan Kualiti | Presenter | 25 Aug 2017 | UPNM |
| 13. | 5 th International Conference on Solid State Science and Technology (ICSSST2015) | Plastic Deformation of Gamma Irradiated Gold Ball Bond Wire Bonding | Presenter | 13-16 Dec 2015 | UPM |
| 14. | 1 st Electronic Packaging Interconnect Technology Symposium (EPITS2015) | Nanoindentation Study on Heat Treated Gold Wire Bonding | Presenter | 21 Nov 2015 | UNIMAP |
| 15. | Seminar Saintis Muda 2015 | Characterization of Microelectronic Package | Presenter | 5 Nov 2015 | UPNM |

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| | | Interconnection Towards Extreme Gamma Radiation Condition | | | |
| 16. | 11 th IEEE International Conference on semiconductor electronics (ICSE2014) | Effects of thermal cycling on the mechanical properties of Gold wire bonding | Presenter | 27-29 Aug 2014 | UKM |
| 17. | 4 th International Conference on Solid State Science and Technology (ICSSST2015) | High temperature storage and gamma radiation effects on mechanical properties of stacked die package | Presenter | 18-20 Dec 2012 | UM, MMU |
| 18. | National Physics Conference 2012 (PERFIK2012) | Gamma-irradiation Effect on Material Properties Behaviour of Semiconductor Package | Presenter | 19-21 Nov 2012 | UKM |
| 19. | 10 th International Conference on semiconductor electronics (ICSE2012) | Radiation Exposure induced Failure on semiconductor package material | Presenter | 19-21 Sept 2012 | UKM |
| 20. | Seminar Siswazah Jabatan Fizik, UPM | Principle and Application Atomic Force Microscope | Invited Speaker | 5 June 2005 | UPM |
| 21. | 6 th Putra Physics Seminar | Surface Plasmon Resonance Study for Detection of Chlorine in Swimming Pool | Presenter | 11 Ogos 2004 | UPM |

3.0 ACADEMIC RECOGNITION AND LEADERSHIP, CONSULTANCY, SERVICE TO THE UNIVERSITY AND SERVICE TO THE COMMUNITY

3.1 Academic Recognition and Leadership

| No. | Academic Recognition | Year | Level | Awarding Body / Name of Institution |
|-----|--|------|---------------|--|
| 1. | Anugerah Kualiti TNC (Penyelidikan & Inovasi) Penerima Skim Insentif Hasil Penyelidikan dan Inovasi Tahun 2023 | 2024 | University | Universiti Pertahanan Nasional Malaysia |
| 2. | Anugerah Khidmat Cemerlang UPNM Tahun 2023 | 2024 | University | Universiti Pertahanan Nasional Malaysia |
| 3. | Editor for International Conference on Advanced Materials and Applied Sciences 2024 (IConMAS 2024) publication | 2024 | International | Semarak Ilmu |
| 4. | Editor Buletin@Ria Edisi Keempat | 2023 | University | Pusat Asasi Pertahanan, Universiti Pertahanan Nasional Malaysia |
| 5. | Sijil Pretasi Cemerlang 2022 | 2023 | University | Universiti Pertahanan Nasional Malaysia |
| 6. | International Invention, Innovation and Design Competition 2023 Silver Medal | 2023 | International | Kolej Vokasional Tanah Merah, Digital360, UiTM Cawangan Kelantan |

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| | | | | Bahagian Pendidikan dan Latihan Teknikal Vikasional Zon Kelantan-Zon Terengganu (KELTER) |
| 7. | Pre-University Matriculation Innovation Competition 2023 (PIITRAM 2023) Silver Medal | 2023 | National | Universiti Putra Malaysia |
| 8. | Pusat Asasi Pertahanan Innovation Competition 2023 (PAPIC 2023) 1 Gold, 3 Silver Best Innovation award | 2023 | University | Universiti Pertahanan Nasional |
| 9. | UPNM InTeleX 2023 1 Gold Excellence in Innovation Award | 2023 | University | Universiti Pertahanan Nasional Malaysia |
| 10. | Persidangan dan Ekspo Ciptaan Institut Pengajian Tinggi Antarabangsa (PECIPTA 2022) 1 Silver | 2022 | National | Kementerian Pengajian Tinggi Malaysia |
| 11. | National Innovation Inventions Competition 2022 (NIICe 2022) 1 Silver 2 Bronze | 2022 | National | Universiti Tun Hussein Onn Malaysia |
| 12. | Best Paper Award in Solder and Soldering | 2022 | National | Electronic Packaging Research Society of Malaysia |
| 13. | Sijil Prestasi Cemerlang 2021 | 2022 | University | Universiti Pertahanan Nasional |
| 14. | The 2 nd Inter Pre-University Matriculation Innovation Competition 2022 (PIITRAM 2022) 1 Gold 1 Silver | 2022 | National | Majlis Dekan / Pengarah Asasi Uiversiti Awam |
| 15. | Anugerah Perkhidmatan Setia 15 Tahun | 2022 | University | Universiti Pertahanan Nasional |
| 16. | Defence Security and Sustainability 2022 (DSS 2022) 1 Gold & 1 Silver | 2022 | University | Universiti Pertahanan Nasional |
| 17. | Pusat Asasi Pertahanan Innovation Competition 2022 (PAPIC 2022) 2 Gold 2 Silver Best Popular Poster Award | 2022 | University | Universiti Pertahanan Nasional |
| 18. | Pusat Asasi Pertahanan Innovation Competition 2021 (PAPIC 2021) 2 nd Best Popular Poster Award 2 nd Best Innovation Award | 2021 | University | Universiti Pertahanan Nasional |
| 19. | Pre-University Malaysia Innovation Competition 2021 1 Gold 1 Silver | 2021 | National | STEM Foundation Center UMT Foundation in Science and Medicine UNiSZA |
| 20. | Sijil Prestasi Cemerlang 2020 | 2021 | University | Universiti Pertahanan Nasional |
| 21. | Silver Award - PKP Publication Contest 3.0 | 2021 | University | Universiti Pertahanan Nasional |
| 22. | Sijil Prestasi Cemerlang 2019 | 2020 | University | Universiti Pertahanan Nasional |

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| 23. | Journal Editorial for Solid State Phenomena (Special Edition) | 2019 | International | Scientific.net |
| 24. | Materials Technology Challenges 3.0 (MTC 2019) | 2019 | International | The MASS Malaysia Universiti Pertahanan Nasional |
| 25. | Defence Security and Sustainability 2019 (DSS 2019) – 1 Gold, 1 Silver & 1 Bronze | 2019 | University | Universiti Pertahanan Nasional |
| 26. | Defence Security and Sustainability 2017 (DSS 2017) – Bronze | 2017 | University | Universiti Pertahanan Nasional Malaysia |
| 27. | Anugerah Khidmat Cemerlang UPNM | 2015 | University | Universiti Pertahanan Nasional Malaysia |
| 28. | Best Poster Award 1 st Electronic Packaging Interconnect Technology Symposium | 2015 | National | Universiti Malaysia Perlis |
| 29. | Award - Subject Matter Expert in National Research Project "EPRS-FYP Solder and Soldering 2013-2014" | 2014 | National | Electronics Packaging Research Society (EPRS) |

3.2 Consultancy work that benefited to the University.

| No. | Title | Year | Sponsor | Value | Duration |
|-----|--------------------------|---------------------------------|---|-------|------------------------------------|
| 1. | Technical Paper Reviewer | 2024 | Jurnal Kejuruteraan | | |
| 2. | Technical Paper Reviewer | 2024 | International Conference on Advanced Materials and Applied Sciences 2024 (IConMAS 2024) | | |
| 3. | Technical Paper Reviewer | 2024 | The 9th International Conference on Solid State Science and Technology 2023 | | |
| 4. | Technical Paper Reviewer | 2023, 2022, 2018, 2017 | Sains Malaysiana | | |
| 5. | Technical Paper Reviewer | 2023, 2022, 2018 | Soldering & Surface Mount Technology | | |
| 6. | Technical Paper Reviewer | 2023 | Green Processing and Synthesis | | |
| 7. | Technical Paper Reviewer | 2023 | Materials Today: Proceeding | | |
| 8. | Technical Paper Reviewer | 2022 | Solid State Science and Technology | | |
| 9. | Technical Paper Reviewer | 2021 | Physics and Technology in Medicine | | |
| 10. | Technical Paper Reviewer | 2020, 2018, 2017 | Journal of Non-Crystalline Solids | | |
| 11. | Technical Paper Reviewer | 2019 | Solid State Phenomena | | |
| 12. | Technical Paper Reviewer | 2019 | The Malaysian Journal of Analytical Science (MJAS) | | |
| 13. | Jury | 2024 | The 4 th Pre-University Matriculation Innovation Competition 2024 (PIITRAM) | | 20, 23 & 24 th February |

| No. | Title | Year | Sponsor | Value | Duration |
|-----|---------------|------|---|-------|-------------------------------|
| | | | 2024) | | 2024 |
| 14. | Head of Jury | 2023 | Pusat Asasi Pertahanan Innovation Competition 2023 | | 18 Oct 2023 |
| 15. | Jury | 2023 | Innovation in Teching and Learning EXPO (UPNM-InTeLEx) Bulan Akademia 2023 | | 10 Oct 2023 |
| 16. | Jury | 2022 | 2 nd Inter Pre-University Matriculation Innovation Competition 2022 | | 2-4 March 2022 & 8 March 2022 |
| 17. | Judge (Crown) | 2021 | 5 th International Innovation, Design and Articulation (i-IDEA™ 2020) | | 8-24 March 2021 |
| 18. | Judge | 2020 | Virtual Materials Technology Challenges 4.0 (v-MTC4.0) | | 2 Sept 2020 |
| 19. | Jury | 2017 | 6 th International Conference on Solid State Science and Technology & Workshop on Advanced Materials Technology: Growth & Characterization | | 13-16 Nov 2017 |

3.3 Service to the University

| No. | Position/Membership | Duration |
|-----|--|----------------------------|
| | Department Physics | |
| 1. | Coordinator Module Physics II session 2024/2025 | June 2024 – April 2025 |
| 2. | Coordinator Module Physics I & II session 2023/2024 | July 2023 – April 2024 |
| 3. | Coordinator Physics I (Slide) session 2022/2023 | Jun 2022 – April 2023 |
| 4. | Coordinator for Physics I session 2021/2022 | Jun 2021– April 2022 |
| 5. | Committee Physics I Module Workshop | 8-9 July 2021 |
| 6. | Coordinator Physics II session 2020/2021 | 4 Jan 2021 – 16 April 2021 |
| 7. | Head of Department of Physics | Aug 2016 – Dec 2019 |
| 8. | Coordinator Physics I Session 2015/2016 | April 2015 – Mac 2016 |
| 9. | Coordinator Physics II Module Session 2014/2015 | April 2014 – Mac 2015 |
| 10. | Coordinator Webinar: How to Sustain Your Passion as Postgraduate Students | July 2021 |
| | Pusat Asasi Pertahanan | |
| 11. | Committee of STEM | 2019 – present |
| 12. | Chairman of Audit Committee PAP | 9 October 2020 – present |
| 13. | Committee of Academic Quality for Pusat Asasi Pertahanan | Since Oct 2020 – present |
| 14. | Committee Tabung Amanah PAP | 31 Jan 2023 – present |
| 16. | Reviewer for Mock Presentation bagi Pameran Defence, Security and Sustainability 2024 (DSS 2024) | 21 Feb 2024 |
| 17. | Coordinator for Program Jangkauan Komuniti di Sekolah Menengah Bukit Jalil, Kuala Lumpur | 18 September 2023 |
| 18. | Committee for Program Kajian Pasaran Ijazah Sarjana Muda Sains (Sains Keselamatan Industri) | 20 July 2023 |

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| 19. | Committee for Majlis Perasmian Bangunan Jauhari UPNM | 3 Mei 2023 |
| 20. | Committee Sponsorship & Promosi for Pertandingan Debat Inter-Asasi Malaysia Tahun 2023 | 18 Jan 2023 |
| 21. | AJK Jamuan Hari Raya Pusat Asasi Pertahanan UPNM – AJK Pembelian | 13 Mei 2022 |
| 22. | Committee, Buletin@Ria Third Edition | June 2021 |
| 23. | Technical Committee Bangunan Jauhari UPNM | |
| 24. | Mentor 'Pertandingan Inovasi Inter-Asasi Matrikulasi 2021 (PIITRAM 2021) | Jan – March 2021 |
| 25. | Committee, Program Baharu Ijazah Sarjana Muda Sains Penyiasatan Forensik (Kepujian) | April 2020 |
| 26. | Committee Semakan Kurikulum Program Asasi | Feb 2020 |
| 27. | Committee, Program Pasca Siswazah Jabatan Sains Pertahanan, FSTP | Feb 2018 |
| 28. | Academic Advisor | July 2020 – present |
| 29. | Panel Reviewer for Permohonan Persidangan PAP | 2022 – present |
| 30. | Panel Reviewer for Post Graduate Colloquium/ Proposal Defence | 2016 – present |
| 31. | Panel Reviewer 'Grant Research' Proposal FRGS/GPJP/GPPP Pusat Asasi Pertahanan | 2016 – present |
| 32. | Deputy President, Kelab Kebajikan dan Rekreasi PAP | 2016 – 2018 |
| 33. | Committee for Program Ijazah Sarjana Muda (Sains Forensik) | May 2016 |
| 34. | Committee for Permohonan Program Baru Ijazah Sarjana Muda Sains (Fizik) | July 2015 |
| 35. | Committee for Penyediaan Kertas Kerja untuk Senat Bagi Program Asasi Pangajian Islam Pertahanan | Nov 2014 |
| 36. | Panel Forum 'How to be a Successful PhD Student' | 12 Dis 2014 |
| 37. | Member of Kelab Rekreasi Pusat Asasi Pertahanan (KRPAP) | 2009 – present |
| 38. | University Head of Internal Auditor MS ISO 9001 | Dis 2020-present |
| 39. | Mentor Permohonan Geran Penyelidikan Universiti Pertahanan Nasional Malaysia (UPNM) – Material Science | 20 Feb 2023 – present |
| 40. | Panel Penilai Penarafan Bintang Pengurusan Kualiti (QMSR) di Universiti Pertahanan Nasional Malaysia | 5 Feb 2024 – 31 Dec 2024 |
| 41. | Committee Penilaian Spesifikasi dan Teknikal Sebutarga UPNM | May 2021 |
| 42. | Committee of Pembangunan dan Pengurusan Akademik | Oct 2016 – Dec 2019 |
| 43. | Internal Auditor MS ISO 9001 | Oct 2014 – Nov 2020 |
| 44. | Document Manager for MS ISO 9001 | Oct 2014 – Nov 2020 |
| 45. | Committee of Hari Inovasi & Majlis Anugerah (HIMA) UPNM | Since 2019 |
| 46. | Committee of Convocation UPNM | Since 2019 |
| 47. | Internal Auditor for Komponen Akademik sempena Audit Autonomi UPNM 2017 | 2017 |
| 48. | Mentor for Bengkel Pemurnian Kertas Cadangan Geran Penyelidikan | 2016 |
| 49. | Review for Temuduga Mengikut Kursus Peralihan Pembantu Makmal Gred C19/22 (Bridging Programme) | Oct 2016 |
| 50. | Record Officer for MS ISO 9001 | 2008 – 2010 |
| 51. | Member of NADIMASA | Since 2010 |
| 52. | Member of KUPENA | Since 2010 |
| 53. | Chairperson for Viva Voce Nur Syakirah Binti Abdul Rahim (Master Kimia) | 22 Aug 2023 |
| 54. | Chairperson for Viva Voce Abfraha bin Yahya (Master Mathematic) | 23 May 2017 |

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| 55. | National / International Chairman International Conference on Advanced Materials and Applied Sciences 2024 (IConMAS 2024) | 31 Mei 2023 – 2024 |
| 56. | Committee Pertandingan Inovasi Inter-Asasi Matrikulasi 2022 (PIITRAM 2022) | Nov 2021- March 2022 |
| 57. | Session Chair, 7 th International Corrosion Prevention Virtual Symposium for Research Scholar (CORSYM 2021) | 17 th November 2021 |
| 58. | Committee 'Kuiz Kimia Kebangsaan Malaysia (K3M)' | 2021 |
| 59. | Committee (Secretariat and Scientific) in 10 th International Conference on X-Ray and Related Technique in Research and Industry 2021 | 18-19 Aug 2021 |
| 60. | Registration Team, 7 th International Corrosion Prevention Virtual Symposium for Research Scholar (CORSYM 2021) | 17 Nov 2021 |
| 61. | Committee, The 7 th International Conference on Solid State Science & Technology 2019 | Nov 2018 – Sep 2019 |

3.4 Service to the community

| No. | Organization | Role | Start Date | End Date | Level |
|-----|---|--|---------------|---------------|--|
| 1. | Electronic Packaging Research Society | Treasurer | 26 April 2023 | 25 April 2025 | National |
| 2. | Persatuan Sains & Teknologi Keadaan Pepejal | Deputy Secretary | Dec 2022 | Dec 2024 | National |
| 3. | Electronic Packaging Research Society | Treasurer | 26 April 2021 | 25 April 2023 | National |
| 4. | Persatuan Sains & Teknologi Keadaan Pepejal | EXCO | 26 Mac 2016 | 2022 | National |
| 5. | Electronic Packaging Research Society | Treasurer | 15 April 2015 | 17 Jun 2021 | National |
| 6. | Sek Men Bukit Jalil | Coordinator | | | School |
| 7. | Kementerian Pendidikan Peringkat Wilayah Persekutuan (Guru-guru Sains Sekolah Rendah) | Facilitator Bengkel Training of Trainers bagi Program Mentor Mentee di Bawah Inisiatif Pengukuhan STEM | 17 Oct 2018 | 18 Oct 2018 | Kementerian Pendidikan Peringkat Wilayah Persekutuan |
| 8. | Sek Men Keb Bandar Tasik Selatan | Coordinator | 11 July 2023 | 11 July 2023 | School |
| 9. | Sek. Keb. Bandar Bandar Tun Razak 1 | Committee of Pameran Sempena Karnival Pendidikan (STEM) | 12 Feb 2020 | 12 Feb 2020 | School |
| 10. | Sek. Men. Keb. Bandar Tasik Selatan | Committee of Pameran Sempena Karnival Pendidikan (STEM) | 14 Aug 2018 | 16 Aug 2018 | Kementerian Pendidikan Peringkat Wilayah Persekutuan |
| 11. | Sek. Men. Keb. Bandar Tasik Selatan | Committee of Pameran Sempena Karnival Pendidikan (STEM) | 29 Mac 2018 | 7 April 2018 | Sek. Men. Keb. Bandar Tasik Selatan |
| 12. | Gagasan Pendidikan Melayu Malaysia | Committee of Pertandingan Olympiad | 19 April 2018 | 19 April 2018 | Wilayah Persekutuan |

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| | | Sains dan Matematik Peringkat Wilayah Persekutuan | | | |
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