

PROF. MADYA TS. DR. WAN ZAKIAH BINTI WAN ISMAIL

PENSYARAH UNIVERSITI DS14

CONTACT

PHONE
067988500

E-MAIL
drwanzakiah@usim.edu.my

FACULTY
Fakulti Kejuruteraan Dan Alam Bina

SUPERVISION

	COMPLETED	ONGOING
PhD	0	6
Master	3	4

AREAS OF EXPERTISE

- Electronic Sensors
- Optical/photonic Sensor
- Sensor In Environmental Monitoring

ACADEMIC QUALIFICATION

- 2016 **PhD** - Lasers And Quantum Electronics
- 2007 **Master** - Electronics (telecommunication)
- 2005 **Bachelor** - Electronics

RESEARCH

1. **ANOMALY DETECTION IN WATER QUALITY PARAMETERS AND POLLUTION PREDICTION BASED ON REGRESSION AND RANDOM FOREST THEORY**
   2026 | GERAN SEPADAN ANTARABANGSA | ON GOING | MAIN RESEARCHER
2. **SMART AQUAGUARD: IOT-POWERED WATER QUALITY MONITORING FOR SUSTAINABLE AQUATIC MANAGEMENT**
   2025 | GERAN KPT | ON GOING | CO-RESEARCHER
3. **GOLD AUTHENTICATION SYSTEM**
   2025 | GERAN PENYELIDIKAN INDUSTRI | ON GOING | CO-RESEARCHER
4. **SMART AQUAGUARD: IOT-POWERED WATER QUALITY MONITORING FOR SUSTAINABLE AQUATIC MANAGEMENT**
   2025 | GERAN PENYELIDIKAN INDUSTRI | ON GOING | CO-RESEARCHER
5. **DATA COLLECTION AND ANALYSIS OF HEMOGLOBIN USING REAGENTLESS BLOOD TESTING AND VITAL SIGN ANALYSER**
   2025 | GERAN PENYELIDIKAN INDUSTRI | ON GOING | MAIN RESEARCHER

RESEARCH

6. UAV-BASED AUTOMATED OIL PALM TREE DETECTION AND COUNTING

2025 | GERAN PENYELIDIKAN INDUSTRI | ON GOING | CO-RESEARCHER

7. A NOVEL WATER QUALITY ANOMALIES SENSING AND FORECASTING METHOD USING TIME SERIES REGRESSION FOREST (TSRF) FOR SUSTAINABLE MODERN AGRICULTURE.

2024 | GERAN KPT | ON GOING | MAIN RESEARCHER

8. STUDY OF HEMOGLOBIN AND GLUCOSE USING VISIBLE (VIS) AND NEAR INFRA-RED (NIR)-BASED HEALTHCARE PLATFORM AND DEVICES

2024 | GERAN PENYELIDIKAN INDUSTRI | ON GOING | MAIN RESEARCHER

9. DEVELOPMENT OF A SPECTROMETER FOR DETECTING CHEMICAL CONTAMINANT IN WATER

2023 | GERAN PENYELIDIKAN INDUSTRI | COMPLETED | MAIN RESEARCHER

10. OPTICAL LIGHT PROPAGATION METHOD IN MICROPLASTIC WATER CONTAMINATION FOR RAPID WATER SENSING APPLICATION

2023 | GERAN KPT | ON GOING | CO-RESEARCHER

11. DEVELOPMENT OF INTELLIGENT WATER QUALITY MONITORING SYSTEM FOR AGRICULTURE SECTOR IN MALAYSIA

2022 | GERAN SEPADAN AGENSI KERAJAAN | ON GOING | MAIN RESEARCHER

12. TESTING AND DATA COLLECTION OF VITAL SIGNS USING REVA AND MASSIMO DEVICES

2022 | GERAN PENYELIDIKAN INDUSTRI | COMPLETED | MAIN RESEARCHER

13. DEVELOPMENT OF MICROELECTRONICS SYSTEMS, RELATED TECHNOLOGY AND PRODUCTS FOR VIS NIR-BASED HEALTHCARE PLATFORM AND DEVICES

2022 | GERAN PENYELIDIKAN INDUSTRI | COMPLETED | MAIN RESEARCHER

14. DEVELOPMENT OF LASER ILLUMINATION WARNING SYSTEM BASED ON LASER PHOTODIODE AND DETECTION TECHNOLOGY

2022 | GERAN PENYELIDIKAN INDUSTRI | COMPLETED | MAIN RESEARCHER

15. DEVELOPMENT OF MOBILE APPLICATION FOR WOMEN'S "PRELOVED" BUSINESS PLATFORM: FASHION ARCHADE (FACADE)

2022 | GERAN PENYELIDIKAN AGENSI KERAJAAN | COMPLETED | CO-RESEARCHER

16. FORMULATING A METHOD TO DETECT CONTAMINANT IN WATER BASED ON LIGHT PROPAGATION THEORY FOR CONSERVING NATURAL WATER RESOURCES

2021 | GERAN KPT | ON GOING | MAIN RESEARCHER

17. SOLAR GREEN FACADE AND IOT - BASED SYSTEM FOR INDOOR AIR QUALITY TOWARDS A SUSTAINABLE LIFE OF 'SAKINAH'

2021 | GERAN PENYELIDIKAN FLAGSHIP | ON GOING | CO-RESEARCHER

RESEARCH

18. OPTIMIZATION OF NEAR INFRARED SPECTROSCOPY (NIRS) CONFIGURATION PARAMETERS FOR HAND, FOOT AND MOUTH DISEASE (HFMD) DETECTION

2020 | GERAN PENYELIDIKAN USIM RACER | COMPLETED | CO-RESEARCHER

19. DESIGN AND DEVELOPMENT OF PERSONAL PROTECTIVE EQUIPMENT (PPE) BOX FOR HEALTHCARE APPLICATION

2020 | GERAN PENYELIDIKAN COVID-19 | COMPLETED | CO-RESEARCHER

20. A NEW PARAMETRIC MODULE OF THERMAL AND LIGHTING BASED ON SOLAR CELL FACADE SYSTEM IN SCHOOL

2020 | GERAN KPT | COMPLETED | CO-RESEARCHER

21. NANOHYBRID BASED MULTIPLEXED NANO-INTERDIGITATED ELECTRODE ARRAY (NIDEA) BIOSENSOR FOR CANCER RELATED DISEASE

2020 | GERAN KPT | ON GOING | CO-RESEARCHER

22. A CONCEPTUAL MODELLING OF QUANTITATIVE GRADING VALUATION OF RUBY STONE VIA USING CHARGE-COUPLED DEVICE (CCD) TOMOGRAPHY APPROACH

2020 | GERAN KPT | COMPLETED | CO-RESEARCHER

23. INVESTIGATING LIGHT SCATTERING ON PROPERTIES OF RANDOM LASERS BASED ON SCATTERING PROBABILITY THEORY FOR POTENTIAL USE IN MEDICAL AND BIOSENSING APPLICATIONS

2019 | GERAN KPT | COMPLETED | MAIN RESEARCHER

24. BIOCLIMATIC ARCHITECTURE AND INTEGRATED HYBRID SOLAR COOLING SYSTEM FOR ENGAGING RESILIENT COMMUNITY TO CLIMATE CHANGE

2019 | GERAN PENYELIDIKAN USIM | COMPLETED | CO-RESEARCHER

25. MODELLING OF QUANTUM BASED TUNNEL DIODE FOR THZ MEDICAL IMAGING

2019 | GERAN PENYELIDIKAN USIM | COMPLETED | CO-RESEARCHER

26. ANALYZING PERFORMANCE OF RANDOM LASERS AS THE OPTICAL DEVICES FOR BIOSENSING AND MEDICAL APPLICATIONS

2018 | GERAN PENYELIDIKAN USIM | COMPLETED | MAIN RESEARCHER

27. THE STUDY OF DRUNKEN ABNORMAL HUMAN GAIT RECOGNITION USING ACCELEROMETERS IN MOBILE APPLICATION

2018 | GERAN PENYELIDIKAN USIM | COMPLETED | CO-RESEARCHER

28. ULTRA-HIGH SENSITIVE BIOANALYTICAL DETERMINATION OF LARD USING NANOHYBRID BIOSENSING APPROACH AS A TOOL FOR HALAL PRODUCT INVESTIGATION

2018 | GERAN PENYELIDIKAN KHAS | ON GOING | CO-RESEARCHER

29. CHARACTERIZATION OF TIN-DOPED ZINC OXIDE NANOWIRES SYNTHESIZED BY HOT-TUBE THERMAL EVAPORATION METHOD

2018 | GERAN PENYELIDIKAN USIM | COMPLETED | CO-RESEARCHER

RESEARCH

30. RECYCLING @ U USIM

2017 | GERAN PENYELIDIKAN INDUSTRI | COMPLETED | CO-RESEARCHER

PUBLICATION

1. WATER QUALITY EVALUATION AND ANALYSIS BY INTEGRATING STATISTICAL AND MACHINE LEARNING APPROACHES

ALGORITHMM

2025 | JOURNAL | OTHER DATABASE | CORRESPONDING AUTHOR

2. WATER QUALITY INDEX (WQI) FORECASTING AND ANALYSIS BASED ON NEURO-FUZZY AND STATISTICAL METHODS

APPLIED SCIENCE

2025 | JOURNAL | OTHER DATABASE | CORRESPONDING AUTHOR

3. DETECTION OF OIL IN WATER USING PHOTODIODE AND INTERNET OF THINGS

INTERNATIONAL JOURNAL OF INTEGRATED ENGINEERING

2025 | JOURNAL | OTHER DATABASE | CORRESPONDING AUTHOR

4. PROBLEMS, EFFECTS, AND METHODS OF MONITORING AND SENSING OIL POLLUTION IN WATER: A REVIEW

WATER

2025 | JOURNAL | OTHER DATABASE | CORRESPONDING AUTHOR

5. A REVIEW OF WATER QUALITY FORECASTING AND CLASSIFICATION USING MACHINE LEARNING MODELS AND STATISTICAL ANALYSIS

WATER

2025 | JOURNAL | OTHER DATABASE | CORRESPONDING AUTHOR

6. INTERACTIVE FUZZY LOGIC INTERFACE FOR ENHANCED REAL-TIME WATER QUALITY INDEX MONITORING

ALGORITHMS

2025 | JOURNAL | OTHER DATABASE | CORRESPONDING AUTHOR

7. I-V CHARACTERISTICS OF GAAS/ALAS ASYMMETRIC SPACER LAYER TUNNEL DIODE (ASPAT) USING STATISTICAL VALIDATION

JOURNAL OF SCIENCE AND TECHNOLOGY

2025 | JOURNAL | MYCITE | CO-AUTHOR

8. PARAMETRIC OF DAYLIGHT PERFORMANCE THROUGH FACADE ENVELOPE RATIO OF HIGH-RISE OFFICE BUILDING IN TROPICAL

INTERNATIONAL CONFERENCE ON SCIENCE, BUILT ENVIRONMENT AND ENGINEERING

2025 | PROCEEDING | OTHER DATABASE | MAIN AUTHOR

PUBLICATION

9. HYBRID SLIDING MODE CONTROL WITH GAIN SCHEDULING PROPORTIONAL INTEGRAL DERIVATIVE CONTROLLER FOR WATER TANK SYSTEM

INTERNATIONAL JOURNAL OF INTEGRATED ENGINEERING

2024 JOURNAL JCR CO-AUTHOR

10. ALUMINUM DOPED ZINC OXIDE AS UV LASER-BASED NANOTHERMOMETER

PHYSICA SCRIPTA

2024 JOURNAL JCR CO-AUTHOR

11. DETECTION OF CHEMICAL CONTAMINANTS IN WATER FOR IRRIGATION SYSTEMS: A SYSTEMATIC REVIEW

JOURNAL OF ADVANCED RESEARCH IN APPLIED SCIENCES AND ENGINEERING TECHNOLOGY

2024 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

12. STUDY OF LED RETROFIT LAMPS IN HSPV LUMINAIRES BASED ON PHOTOMETRIC METHOD FOR ROAD LIGHTING

PERTANIKA JOURNAL SCIENCE AND TECHNOLOGY

2024 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

13. TORQUE ASSESSMENT FOR LOW VOLTAGE AERIAL BUNDLE CABLE (ABC) INSULATED PIERCING CONNECTOR (IPC) USING AI ANALYSIS

2024 IEEE INTERNATIONAL CONFERENCE ON APPLIED ELECTRONICS AND ENGINEERING (ICAEE)

2024 PROCEEDING SCOPUS CO-AUTHOR

14. TORQUE ASSESSMENT FOR LOW VOLTAGE AERIAL BUNDLE CABLE (ABC) INSULATED PIERCING CONNECTOR (IPC) USING AI ANALYSIS

2024 IEEE INTERNATIONAL CONFERENCE ON APPLIED ELECTRONICS AND ENGINEERING

2024 PROCEEDING SCOPUS CO-AUTHOR

15. AUTOMATIC IDENTIFICATION SYSTEM NETWORK FOR MARINE TRAFFIC DETECTION

2024 BOOK CORRESPONDING AUTHOR

16. ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024 BOOK CO-AUTHOR & CO-EDITOR

17. DETECTION OF CONTAMINATION IN WATER USING SPECTROSCOPY

ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024 CHAPTER IN BOOK MAIN AUTHOR

18. CHAPTER 7:REDESIGNING THE LASER WARNING SYSTEMS FOR MILITARY APPLICATIONS

ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024 CHAPTER IN BOOK CO-AUTHOR

19. INVESTIGATION OF PHOTOMETRIC DISTRIBUTION OF LED AND HSPV FOR ROAD LIGHTING

JOURNAL OF ENGINEERING AND APPLIED SCIENCE

2023 JOURNAL SCOPUS CORRESPONDING AUTHOR

PUBLICATION

20. A REVIEW STUDY OF BINARY AND TERNARY ZNO/C COMPOSITES AS ANODES FOR HIGH-CAPACITY LITHIUM-ION BATTERIES

IONICS

2023 JOURNAL ISI, SCOPUS AND ERA CO-AUTHOR

21. A REVIEW ON CURRENT DIAGNOSTIC TOOLS AND POTENTIAL OPTICAL ABSORPTION SPECTROSCOPY FOR HFMD DETECTION

ANALYTICAL BIOCHEMISTRY

2023 JOURNAL ERA CO-AUTHOR

22. MODELLING BACKSCATTERED LIGHT IN FIBRE OPTIC BASED ON LIGHT PROPAGATION

ASM SCIENCE JOURNAL

2023 JOURNAL SCOPUS CORRESPONDING AUTHOR

23. DURIAN DETECTION AND COUNTING SYSTEM USING DEEP LEARNING

JOURNAL OF ENGINEERING SCIENCE AND TECHNOLOGY

2023 JOURNAL ERA CO-AUTHOR

24. RANDOM LASING BEHAVIOUR IN AL-DOPED ZNO NANORODS

OPTICAL MATERIALS

2023 JOURNAL ISI CO-AUTHOR

25. DEVELOPING A PORTABLE SPECTROMETER TO DETECT CHEMICAL CONTAMINANTS IN IRRIGATION WATER

AGRICULTURE

2023 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

26. INTEGRATION OF SENSING FRAMEWORK WITH A DECISION SUPPORT SYSTEM FOR MONITORING WATER QUALITY IN AGRICULTURE

AGRICULTURE

2023 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

27. SIMULATION STUDY OF ULTRASONIC TOMOGRAPHY APPROACH IN DETECTING FOREIGN OBJECT IN MILK PACKAGING

JOURNAL OF TOMOGRAPHY SYSTEM & SENSORS APPLICATION

2023 JOURNAL OTHER DATABASE MAIN AUTHOR

28. STUDY OF LIGHT EMITTING DIODE (LED) AND HIGH-PRESSURE SODIUM VAPOUR (HPSV) LAMP BASED ON PHOTOMETRIC METHOD FOR ROAD LIGHTING IN MALAYSIA

SEMINAR ANTARABANGSA SAINS DAN ISLAM

2023 PROCEEDING NON-INDEX MAIN AUTHOR

29. DETECTION ON CHEMICAL CONTAMINANTS IN WATER FOR IRRIGATION SYSTEMS: A SYSTEMATIC REVIEW

INTERNATIONAL CONFERENCE ON RECENT ADVANCEMENTS IN SCIENCE AND TECHNOLOGY

2023 PROCEEDING NON-INDEX MAIN AUTHOR

30. TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 BOOK EDITOR

PUBLICATION

31. EMPOWERING THE BUILT ENVIRONMENT:A MULTIDISCIPLINARY APPROACH

2023 BOOK EDITOR

32. BENEFIT OF MIXED MODULATION FORMAT IN OPTICAL NETWORK : AN OVERVIEW

TECHNOLOGIES IN SCIENCE AND ENGINEERING: A MULTIDISCIPLINARY APPROACH

2023 CHAPTER IN BOOK CO-AUTHOR

33. PRINCIPLES, CHARACTERISTICS AND APPLICATION OF OPTICAL FIBRE IN TELECOMMUNICATION AND SENSORY SYSTEM

TECHNOLOGIES IN SCIENCE AND ENGINEERING: A MULTIDISCIPLINARY APPROACH

2023 CHAPTER IN BOOK CO-AUTHOR

34. THE SMART GRASS-CUTTING ROBOT WITH UPCYCLING SOLAR MODULE

TECHNOLOGIES IN SCIENCE AND ENGINEERING: A MULTIDISCIPLINARY APPROACH

2023 CHAPTER IN BOOK CO-AUTHOR

35. OPTICAL SPECTROSCOPY POTENTIAL APPROACH FOR EARLY DISEASE DETECTION: HFMD CASE

TECHNOLOGIES IN SCIENCE AND ENGINEERING: A MULTIDISCIPLINARY APPROACH

2023 CHAPTER IN BOOK CO-AUTHOR

36. CONTROL SYSTEM IN FLUID DIFFERENTIATION AND NATURAL GAS COMPRESSOR SECTORS

TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 CHAPTER IN BOOK CO-AUTHOR

37. PRINCIPLES, CHARACTERISTICS AND APPLICATIONS OF OPTICAL FIBRE IN TELECOMMUNICATION AND SENSORY SYSTEM

TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 CHAPTER IN BOOK CO-AUTHOR

38. THE SMART GRASS-CUTTING ROBOT WITH UPCYCLING SOLAR MODULE

TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 CHAPTER IN BOOK CO-AUTHOR

39. BENEFIT OF MIXED MODULATION FORMAT IN OPTICAL NETWORK: AN OVERVIEW

TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 CHAPTER IN BOOK CO-AUTHOR

40. OPTICAL SPECTROSCOPY POTENTIAL APPROACH FOR EARLY DISEASE DETECTION;HFMD CASE

TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 CHAPTER IN BOOK CO-AUTHOR

41. DESIGN AND ANALYSIS OF WATER QUALITY MONITORING AND FILTRATION SYSTEM FOR DIFFERENT TYPES OF WATER IN MALAYSIA

INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY

2022 JOURNAL ERA CORRESPONDING AUTHOR

PUBLICATION

42. ADVANCEMENTS IN MONITORINGWATER QUALITY BASED ON VARIOUS SENSING METHODS: A SYSTEMATIC REVIEW

INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH

2022 JOURNAL ERA CORRESPONDING AUTHOR

43. SMART AUTOMATIC COOLING SYSTEM WITH REDUCED HUMIDITY EFFECT FOR PET HOUSE DURING COVID-19 CRISIS

ASM SCIENCE JOURNAL

2022 JOURNAL SCOPUS CORRESPONDING AUTHOR

44. SYNTHESIS AND CHARACTERIZATION OF SILVER-GOLD BIMETALLIC NANOPARTICLES FOR RANDOM LASING

NANOMATERIALS

2022 JOURNAL ISI MAIN AUTHOR

45. A REVIEW ON WATER QUALITY MONITORING METHODS BASED ON ELECTRONICS AND OPTICAL SENSING

JOURNAL OF ADVANCED RESEARCH IN APPLIED SCIENCES AND ENGINEERING TECHNOLOGY

2022 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

46. A REVIEW AND METHODOLOGICAL FRAMEWORK OF ADVANCED WATER QUALITY MONITORING SYSTEM FOR AGRICULTURE

ENGINEERING TECHNOLOGY INTERNATIONAL CONFERENCE

2022 PROCEEDING WOS CO-AUTHOR

47. DETECTION OF CONTAMINANTS IN WATER FOR IRRIGATION SYSTEM

SEMINAR SAINS ANTARABANGSA

2022 PROCEEDING NON-INDEX CO-AUTHOR

48. A STUDY ON THE SELF-SUSTAINING SOLAR MODULE BY UTILIZING SOLAR CELL FROM NON-DEGRADABLE WASTE

REKAYASA HIJAU: JURNAL TEKNOLOGI RAMAH LINGKUNGAN

2021 JOURNAL OTHER DATABASE CO-AUTHOR

49. INVESTIGATING THE QUALITY OF MILK USING SPECTROMETRY TECHNIQUE AND SCATTERING THEORY

ENGINEERING, TECHNOLOGY & APPLIED SCIENCE RESEARCH

2021 JOURNAL WOS CORRESPONDING AUTHOR

50. ANALYSIS ON CLARITY OF RUBIES GEMSTONES USING CHARGE-COUPLED DEVICE (CCD)

JOURNAL OF TOMOGRAPHY SYSTEM & SENSORS APPLICATION

2021 JOURNAL OTHER DATABASE CO-AUTHOR

51. SIMULATION STUDY ON CCD TOMOGRAPHY SYSTEM FOR RUBY STONE OPTICAL PROPERTIES

JOURNAL OF TOMOGRAPHY SYSTEM & SENSORS APPLICATION

2021 JOURNAL OTHER DATABASE CO-AUTHOR

52. A HYBRID RANDOM LASER USING DYE WITH SELF-ORGANIZED GAN NANORODS

SEMICONDUCTOR SCIENCE AND TECHNOLOGY

2021 JOURNAL JCR MAIN AUTHOR / CONTACT PERSON IN USIM

PUBLICATION

53. A REVIEW ON THERMAL EVAPORATION METHOD TO SYNTHESIS ZINC OXIDE AS PHOTOCATALYTIC MATERIAL

NANO HYBRIDS AND COMPOSITES

2021 JOURNAL WOS CO-AUTHOR

54. TOMOGRAPHY SYSTEM TOWARDS THE INDUSTRIAL REVOLUTION 4.0

JOURNAL OF TOMOGRAPHY SYSTEM & SENSORS APPLICATION

2021 JOURNAL OTHER DATABASE CO-AUTHOR

55. ANALYSIS OF MILK FROM DIFFERENT SOURCES BASED ON LIGHT PROPAGATION AND RANDOM LASER PROPERTIES

PHOTONICS

2021 JOURNAL JCR CORRESPONDING AUTHOR

56. AN ILLEGAL DUMPING DETECTION SYSTEM BASED ON IMAGE PROCESSING IN OPENALPR

ASM SCIENCE JOURNAL

2021 JOURNAL SCOPUS CORRESPONDING AUTHOR

57. A STUDY ON EARLY DETECTION OF SEWER PIPELINE BLOCKAGE USING CCD TOMOGRAPHY APPROACH

IOP CONF. SERIES: EARTH AND ENVIRONMENTAL SCIENCE

2021 PROCEEDING NON-INDEX CO-AUTHOR

58. ELECTROCHEMICAL DETECTION OF TRIBUTYRIN USING PRUSSIAN BLUE FUNCTIONALIZED GLASSY CARBON ELECTRODE

2021 IEEE INTERNATIONAL CONFERENCE ON SENSORS AND NANOTECHNOLOGY (SENNANO)

2021 PROCEEDING NON-INDEX CO-AUTHOR

59. ELECTROCHEMICAL DETECTION OF TRIBUTYRIN USING GOLD NANOPARTICLE FUNCTIONALIZED SCREEN-PRINTED ELECTRODE

2021 IEEE 19TH STUDENT CONFERENCE ON RESEARCH AND DEVELOPMENT (SCORED)

2021 PROCEEDING NON-INDEX CO-AUTHOR

60. STUDY ON OPTICAL PROPERTIES OF MILK BASED ON LIGHT PROPAGATION THEORY

INTERNATIONAL CONFERENCE ON BIOMEDICAL ENGINEERING (ICOBE 2021)

2021 PROCEEDING NON-INDEX CORRESPONDING AUTHOR

61. ADVANCES IN SUSTAINABLE LIVING IN THE BUILT ENVIRONMENT

2021 BOOK EDITOR

62. ADVANCES IN SUSTAINABLE LIVING:ENGINEERING AND TECHNOLOGY

2021 BOOK EDITOR

63. RADIO OVER FIBRE FREE SPACE OPTICS (ROFSO) SYSTEM

ADVANCES IN SUSTAINABLE LIVING: ENGINEERING AND TECHNOLOGY

2021 CHAPTER IN BOOK CO-AUTHOR

PUBLICATION

64. EFFECT OF THE SLOT SHAPE AND GROUND PLANE ON THE MICROSTRIP PATCH ANTENNA PERFORMANCE

ADVANCES IN SUSTAINABLE LIVING: ENGINEERING AND TECHNOLOGY

2021 | CHAPTER IN BOOK | CO-AUTHOR

65. ANALYSIS OF CURRENT-VOLTAGE CHARACTERISTICS ASSOCIATED TO THE QUANTUM STURCTURE OF ASYMMETRIC SPACER LAYER TUNNEL DIODE

ADVANCES IN SUSTAINABLE LIVING: ENGINEERING AND TECHNOLOGY

2021 | CHAPTER IN BOOK | CO-AUTHOR

66. EMOTION DETECTION BASED ON AUDIO/VOICE SIGNAL FOR AUSTISM SPECTRUM DISPRDER

ADVANCES IN SUSTAINABLE LIVING: ENGINEERING AND TECHNOLOGY

2021 | CHAPTER IN BOOK | CORRESPONDING AUTHOR

67. THE DEVELOPMENT OF SALAH CHAIR USING ELECTRONIC SENSOR TO ASSIST DISABLED MUSLIMS IN PERFORMING PRAYERS

REKA ELKOMIKA: JURNAL PENGABDIAN KEPADA MASYARAKAT

2020 | JOURNAL | OTHER DATABASE | CO-AUTHOR

68. INVESTIGATING LIGHT PROPAGATION IN FULL AND SKIMMED MILK BASED ON SPECTROSCOPY AND MONTE CARLO ANALYSIS

JOURNAL OF ENGINEERING AND APPLIED SCIENCE

2020 | JOURNAL | SCOPUS | MAIN AUTHOR

69. A STUDY OF OBJECT TRANSPARENCY VIA CHARGE-COUPLED DEVICE MATHEMATICAL MODELLING ASSESSMENT

MALAYSIAN JOURNAL OF SCIENCE HEALTH & TECHNOLOGY

2020 | JOURNAL | OTHERS DATABASE | CO-AUTHOR

70. A STUDY OF OBJECT TRANSPARENCY VIA CHARGE-COUPLED DEVICE MATHEMATICAL MODELLING ASSESSMENT

MALAYSIAN JOURNAL OF SCIENCE HEALTH & TECHNOLOGY

2020 | JOURNAL | OTHERS DATABASE | CO-AUTHOR

71. PROPERTIES OF RANDOM LASERS IN A HOLLOW CORE PHOTONIC CRYSTAL FIBER

LASER PHYSICS

2020 | JOURNAL | WOS | MAIN AUTHOR

72. A STUDY OF OBJECT TRANSPARENCY VIA CHARGE-COUPLED DEVICE MATHEMATICAL MODELLING ASSESSMENT

KOLOKIUM SISWAZAH FAKULTI SAINS DAN TEKNOLOGI 2020

2020 | PROCEEDING | NON-INDEX | CO-AUTHOR

73. AUTOMATED MOTION DETECTION SECURITY SYSTEM NOTIFIER USING RASPBERRY PI WITH TELEGRAM

2020 IEEE SYMPOSIUM ON INDUSTRIAL ELECTRONICS & APPLICATIONS (ISIEA)

2020 | PROCEEDING | NON-INDEX | CO-AUTHOR

74. ITERATION STRATEGY AND ITS EFFECT TOWARDS THE PERFORMANCE OF POPULATION BASED METAHEURISTICS

2020 IEEE 8TH CONFERENCE ON SYSTEMS, PROCESS AND CONTROL (ICSPC)

2020 | PROCEEDING | NON-INDEX | CO-AUTHOR

PUBLICATION

75. A STUDY ON MALAYSIA ATMOSPHERIC EFFECT ON RADIO OVER FREE SPACE OPTIC THROUGH RADIO FREQUENCY SIGNAL AND LIGHT PROPAGATION IN FIBER FOR FUTURE COMMUNICATION DEVELOPMENT

2ND INTERNATIONAL CONFERENCE ON APPLIED PHOTONICS AND ELECTRONICS

2020 PROCEEDING NON-INDEX CO-AUTHOR

76. PRINCIPLES AND CHARACTERISTICS OF RANDOM LASERS AND THEIR APPLICATIONS IN MEDICAL, BIOIMAGING AND BIOSENSING

2ND INTERNATIONAL CONFERENCE ON APPLIED PHOTONICS AND ELECTRONICS

2020 PROCEEDING NON-INDEX CORRESPONDING AUTHOR

77. AN OVERVIEW OF RANDOM LASER

2020 BOOK MAIN AUTHOR

78. ENHANCEMENT OF RANDOM LASER PROPERTIES ON SOLID POLYMER FILMS BY INCREASING SCATTERING EFFECT

JOURNAL OF RUSSIAN LASER RESEARCH

2019 JOURNAL ISI MAIN AUTHOR

79. A SIMPLE YET RELIABLE FACIAL EMOTION DETECTION FOR CAMPUS ENVIRONMENT

INTERNATIONAL JOURNAL OF RECENT TECHNOLOGY AND ENGINEERING (IJRTE)

2019 JOURNAL SCOPUS CO-AUTHOR

80. ENHANCING PERFORMANCE OF ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING (OFDM) BASED ON FAST FOURIER TRANSFORM (FFT) IN WIRELESS COMMUNICATION SYSTEM

INTERNATIONAL JOURNAL OF RECENT TECHNOLOGY AND ENGINEERING (IJRTE)

2019 JOURNAL SCOPUS CO-AUTHOR

81. PERFORMANCE ANALYSIS OF SISO AND MIMO FSO COMMUNICATION

SEMINAR ANTARABANGSA ISLAM DAN SAINS

2019 PROCEEDING NON-INDEX CO-AUTHOR

82. ISLAMIC PERSPECTIVE ON SUSTAINABILITY IN JAPAN

ADVANCES IN SUSTAINABLE LIVING

2019 CHAPTER IN BOOK CO-AUTHOR

83. ISLAMIC PERSPECTIVE ON RECYCLING IN JAPAN

ADVANCES IN SUSTAINABLE LIVING

2019 CHAPTER IN BOOK CO-AUTHOR & CO-EDITOR

84. DEVICES IN OPTICS,TOMOGRAPHY AND BIOSENSING

ADVANCES IN SUSTAINABLE LIVING

2019 CHAPTER IN BOOK CO-AUTHOR & CO-EDITOR

85. PLASMONIC EFFECT ON PERFORMANCE OF RANDOM LASERS

ADVANCE SCIENCE LETTERS

2018 JOURNAL SCOPUS MAIN AUTHOR

PUBLICATION

86. AUTOMATED FEATURE DESCRIPTION OF RENAL SIZE USING IMAGE PROCESSING

INTERNATIONAL JOURNAL OF INTEGRATED ENGINEERING

2018 JOURNAL SCOPUS CO-AUTHOR

87. DPSK OTDM DEMULTIPLEXING USING FLEXIBLE PULSE CLOCK FROM RAMAN AMPLIFIER-SOLITON COMPRESSOR

ADVANCE SCIENCE LETTERS

2018 JOURNAL SCOPUS CO-AUTHOR

88. AUTOMATIC FEATURE DESCRIPTION OF ENDOMETRIOMA IN ULTRASONIC IMAGES OF THE OVARY

INTERNATIONAL JOURNAL OF INTEGRATED ENGINEERING

2018 JOURNAL SCOPUS CO-AUTHOR

89. AUTOMATED FEATURE DESCRIPTION OF FOLLICLE SIZE IN ASSISTED REPRODUCTIVE TREATMENT

INTERNATIONAL JOURNAL OF INTEGRATED ENGINEERING

2018 JOURNAL SCOPUS CO-AUTHOR

90. OPTICAL TOMOGRAPHY SYSTEM USING CHARGE-COUPLED DEVICE FOR TRANSPARENT OBJECT DETECTION

INTERNATIONAL JOURNAL OF INTEGRATED ENGINEERING

2018 JOURNAL SCOPUS CO-AUTHOR

91. DESIGN AND FABRICATION OF POLYDIMETHYLSILOXANE BASED LOW COST MICROFLUIDIC FOR ULTRA-FAST DIAGNOSTIC APPLICATIONS

INTERNATIONAL JOURNAL OF INTEGRATED ENGINEERING

2018 JOURNAL SCOPUS CO-AUTHOR

92. DEVELOPMENT OF A SOLAR HOME IN MIDDLE EAST: A REVIEW

INTERNATIONAL JOURNAL OF ADVANCES IN MECHANICAL AND CIVIL ENGINEERING

2018 JOURNAL OTHER DATABASE CO-AUTHOR

93. RANDOM LASERS BASED ON NANODIAMONDS

SPIE PHOTONICS EUROPE

2018 PROCEEDING NON-INDEX CO-AUTHOR

94. PLASMONIC ENHANCED SENSING USING RANDOM LASERS

PROGRESS IN ELECTROMAGNETICS RESEARCH SYMPOSIUM,TOYAMA JAPAN

2018 PROCEEDING NON-INDEX CO-AUTHOR

95. SIMPLE YET RELIABLE FACE DETECTION FOR SECURITY SYSTEM IN CAMPUS ENVIRONMENT

CONTEMPORARY ISSUES:ISLAM AND SCIENCES

2018 CHAPTER IN BOOK CO-AUTHOR

96. HALAL SENSOR- DEVELOPMENT OF OPTICAL TOMOGRAPHY SYSTEM FORSOLID CONTAMINATION DETECTION

CONTEMPORARY ISSUES: ISLAM AND SCIENCE

2018 CHAPTER IN BOOK CO-AUTHOR

PUBLICATION

97. HALAL SENSOR- DEVELOPMENT OF OPTICAL TOMOGRAPHY SYSTEM FOR OLID CONTAMINATION DETECTION

CONTEMPORARY ISSUES: ISLAM AND SCIENCE

2018 | CHAPTER IN BOOK | CO-AUTHOR

98. RADIO OVER FIBER UNDER MALAYSIA ATMOSPHERIC USING OPTISYSTEM SIMULATOR FOR NEXT GENERATION COMMUNICATION

CONTEMPORARY ISSUES: ISLAM AND SCIENCE

2018 | CHAPTER IN BOOK | CO-AUTHOR

99. RANDOM LASER IN A FIBER:COMBINED EFFECTS ON GUIDING AND SCATTERING LEAD TO REDUCTION OF EMISSION THRESHOLD

OPTICAL DATA PROCESSING STORAGE

2017 | JOURNAL | SCOPUS | CO-AUTHOR

100. PLASMONIC EFFECT ON PERFORMANCE OF RANDOM LASERS

INTERNATIONAL CONFERENCE ON COMPUTER AND NETWORK APPLICATIONS

2017 | PROCEEDING | NON-INDEX | MAIN AUTHOR

101. DEVELOPMENT OF A SOLAR HOME IN MIDDLE EAST: A REVIEW

THE IRES INTERNATIONAL CONFERENCE

2017 | PROCEEDING | NON-INDEX | CO-AUTHOR

102. DO NANODIAMOND RANDOM LASERS SHINE BRIGHTER?

THE 3RD AUSTRALIAN NEW ZEALAND CONFERENCE ON OPTICS AND PHOTONICS

2017 | PROCEEDING | NON-INDEX | CO-AUTHOR

103. DPSK OTDM DEMULTIPLEXING USING FLEXIBLE PULSE CLOCK FROM RAMAN AMPLIFIER-SOLITON COMPRESSOR

INTERNATIONAL CONFERENCE ON ADVANCED NETWORKING, COMPUTING AND ENGINEERING TECHNOLOGIES

2017 | PROCEEDING | NON-INDEX | CO-AUTHOR

104. DESIGN AND FABRICATION OF POLYDIMETHYLSILOXANE BASED LOW COST MICROFLUIDIC FOR ULTRA-FAST DIAGNOSTIC APPLICATIONS

2ND INTERNATIONAL WORKSHOP ON COMPUTED TOMOGRAPHY & IMAGING TECHNOLOGY

2017 | PROCEEDING | NON-INDEX | CO-AUTHOR

105. DOPAMINE SENSING AND MEASUREMENT USING THRESHOLD AND SPECTRAL MEASUREMENTS IN RANDOM LASERS

OPTICS EXPRESS

2016 | JOURNAL | WOS | MAIN AUTHOR

106. EXTENDED EMISSION WAVELENGTH OF RANDOM DYE LASERS BY EXPLOITING RADIATIVE AND NON-RADIATIVE ENERGY TRANSFER

APPLIED PHYSICS B:LASERS AND OPTICS

2016 | JOURNAL | WOS | MAIN AUTHOR

PUBLICATION

107. W. Z. WAN ISMAIL, T. P. VO, E. M. GOLDYS AND J. M. DAWES

LASER PHYSICS

2015 JOURNAL WOS MAIN AUTHOR

108. SPECTRAL AND COHERENCE SIGNATURES OF THRESHOLD IN RANDOM LASERS

JOURNAL OF OPTICS

2014 JOURNAL WOS MAIN AUTHOR

AWARDS/RECOGNITION

1. ANUGERAH STAFF CONTOH FAKULTI

2025 UNIVERSITY

2. PHOTOACOUSTIC TOMOGRAPHY CONCEPT FOR EARLY DETECTION OF PREMOLAR CARIES

INNOVATION BANK CHALLENGE 2025

2025 ANTARABANGSA SILVER

3. ANUGERAH PENYELIDIKAN TERBAIK

2024 UNIVERSITY

4. ANUGERAH PENYELIDIK CEMERLANG

2024 OTHERS

5. BEST PAPER AWARD

2024 UNIVERSITY

6. BUKU KARYA SUNTINGAN TERBAIK

2024 UNIVERSITY

7. DEVELOPMENT OF INTELLIGENT WATER QUALITY MONITORING SYSTEM FOR AGRICULTURE SECTOR IN MALAYSIA

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024 UNIVERSITI BRONZE

8. ICE BOX

ICOMPEX 2024- international innovation and invention through exhibition 2024

2024 ANTARABANGSA GOLD

9. INDOOR COMFORT ENVIRONMENT ICE BOX

ICOMPEX 2024- international innovation and invention through exhibition 2024

2024 ANTARABANGSA CERTIFICATE OF APPRECIATION

10. INDOOR COMFORT ENVIRONMENT ICE BOX (BEST INNOVATION AWARD)

ICOMPEX 2024- international innovation and invention through exhibition 2024

2024 ANTARABANGSA

AWARDS/RECOGNITION

11. ANUGERAH KARYA SUNTINGAN TERBAIK

2023 NATIONAL

12. ICE BOX (INDOOR, COMFORT, ENVIRONMENT)

34th INTERNATIONAL INVENTION & TECHNOLOGY EXHIBITION MALAYSIA (ITEX2023)

2023 ANTARABANGSA GOLD

13. NANOHYBRID BASED MULTIPLEXED NANO-INTERDIGITATED ELECTRODE ARRAY (NIDEA) BIOSENSOR FOR CANCER RELATED DISEASE

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023 UNIVERSITI GOLD

14. ANUGERAH QUDWAH HASANAH

2022 UNIVERSITY

15. SMART PARCEL DROP BOX

PERTANDINGAN REKACIPTA INOVASI INTERNASIONAL & NASIONAL 2022 (PRiIN 2022)

2022 ANTARABANGSA SILVER

16. ICE BOX (INDOOR, COMFORT, ENVIRONMENT)

Persidangan dan Ekspo Ciptaan Institusi Pengajian Tinggi Antarabangsa (PECIPTA22)

2022 ANTARABANGSA GOLD

17. E-PROSUMER: SMART PRECISION FERTIGATION SYSTEM

Persidangan dan Ekspo Ciptaan Institusi Pengajian Tinggi Antarabangsa (PECIPTA22)

2022 ANTARABANGSA SILVER

18. ANUGERAH AKADEMIK HARAPAN

2021 UNIVERSITY

19. ANUGERAH PENYELIDIK HARAPAN

2021 UNIVERSITY

20. WATER QUALITY DETECTION USING SMART DECISION

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021 ANTARABANGSA SILVER

21. SMART WATER TURBIDITY SYSTEM

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021 ANTARABANGSA GOLD

22. WATER QUALITY MONITORING USING CPS APPROACH

INNOVATION BANK CHALLENGE (IBC 2021)

2021 UNIVERSITI BRONZE

AWARDS/RECOGNITION

23. WATER TURBIDITY MONITORING SYSTEM USING ELECTRONICS AND OPTICAL SENSING

INNOVATION BANK CHALLENGE (IBC 2021)

2021 UNIVERSITI BRONZE

24. WASTE TO ENERGY MODULE

INTERNATIONAL INNOVATION COMPETITION INNOCOM II,2021

2021 ANTARABANGSA CERTIFICATE OF APPRECIATION

25. WASTE TO ENERGY MODULE CATEGORY SCIENCE AND TECHNOLOGY

INTERNATIONAL INNOVATION COMPETITION INNOCOM II,2021

2021 ANTARABANGSA BRONZE

26. SMART PRECISION FERTIGATION SYSTEM

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021 ANTARABANGSA GOLD

27. SMART VILLAGE

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021 ANTARABANGSA GOLD

28. E-PROSUMER: SMART PRECISION FERTIGATION SYSTEM

INTERNATIONAL VIRTUAL EXPO OF INNOVATION PRODUCT AND SYSTEM DESIGN (In-VIDE) 2021

2021 ANTARABANGSA SILVER

29. ANUGERAH PERKHIDMATAN CEMERLANG

2019 UNIVERSITY

30. V.I.T.A.B (VISUAL IMPAIRMENT TACTILE AUDIO BOOK) SOLAT

INTERNATIONAL CONFERENCE AND EXPOSITION ON INVENTIONS BY INSTITUTIONS OF HIGHER LEARNING (PECIPTA'19

2019 ANTARABANGSA GOLD

31. ILLEGAL DUMPING DETECTION SYSTEM

INVENTION, INNOVATION & DESIGN EXPOSITION 2019 (iidex2019)

2019 ANTARABANGSA BRONZE

32. AUTOMATED MOTION DETECTION SECURITY SYSTEM NOTIFIER USING RASPBERRY PI WITH TELEGRAM

INVENTION, INNOVATION & DESIGN EXPOSITION 2019 (iidex2019)

2019 ANTARABANGSA BRONZE

33. PRIME MINISTER'S AUSTRALIA ASIA_PG PHD INCOMING

2018 INTERNATIONAL

34. I-SOLD: A PROTOTYPE OF SOLAR COOLING INTEGRATED FACADE FOR BALANCING HUMAN COMFORT, SUSTAINABILITY IN WORKING AND LEARNING SPACE

8th EXPOSITION ON ISLAMIC INNOVATION (i-INOVA) 2018

2018 UNIVERSITI BRONZE

AWARDS/RECOGNITION

35. SMART WATER TURBIDITY LEVEL MEASUREMENT WITH IOT ENABLED FOR ENVIRONMENT MONITORING APPLICATION

8th EXPOSITION ON ISLAMIC INNOVATION (i-INOVA) 2018

2018 UNIVERSITI SILVER

36. SPEECH-BASED GENDER RECOGNITION

ISLAMIC INNOVATION STUDENT COMPETITION 2018 (IREKA'18)

2018 UNIVERSITI SILVER

37. A SIMPLE FACE DETECTION METHOD IN CAMPUS ENVIRONMENT TOWARDS A SUSTAINABLE WELL-BEING SOCIETY

8th EXPOSITION ON ISLAMIC INNOVATION (i-INOVA) 2018

2018 UNIVERSITI SILVER

38. KASA SMART RECYCLING

ISLAMIC INNOVATION STUDENT COMPETITION 2018 (IREKA'18)

2018 UNIVERSITI GOLD