



## DR. WAN MAISARAH BINTI MUKHTAR

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### CONTACT

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**Address:** Fakulti Sains Dan  
Teknologi

### SUPERVISION

PhD - Completed: 0, Ongoing: 0

Master - Completed: 1, Ongoing: 0

### AREAS OF EXPERTISE

Nano Photonic

Optical/photonic Sensor

Photonics Materials

### BIOGRAPHY

A lecturer from Fakulti Sains Dan Teknologi. Holds a Phd in Kejuruteraan Mikro Dan Nanoelektronik.

### ACADEMIC QUALIFICATION

Phd in Kejuruteraan Mikro Dan Nanoelektronik (2014)

Master in Teknologi Tenaga (2009)

Bachelor in Fizik Komputeran Dan Elektronik (2004)

### RESEARCH

1. ENHANCING LOCALIZED PLASMONIC EFFECT USING CHROMIUM-GOLD NANORODS COATED ON FIBER PROBE FOR OPTICAL TRAPPING APPLICATION

2023

ON GOING

MAIN RESEARCHER

2. HIGH SENSITIVE FREE SPACE OPTICS - PLASMONIC SENSOR

2014

COMPLETED

MAIN RESEARCHER

# PUBLICATION

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## 1. INSTRUMENTATION ANALYSIS OF FODS PERFORMANCE THROUGH BUNDLED PROBES AND LIGHT SOURCES

2023 PROCEEDING

## 2. SENSITIVITY ANALYSES OF CU/CHITOSAN AND AG/CHITOSAN BASED SPR BIOSENSOR FOR GLUCOSE DETECTION

2021 PROCEEDING

## 3. ENHANCED SPR RESPONSE USING AU/GO THIN FILMS VIA KRETSCHMANN COUPLING BY CONTROLLING THE INCIDENT LIGHT INTENSITIES

2020 JOURNAL

## 4. REAL TIME DETECTION OF MILK'S SPOILAGE USING AU/GO BEND SMF SENSOR BASED ON LOCALIZED SURFACE PLASMON RESONANCE EFFECT

2020 JOURNAL

## 5. GRAPHENE BASED MACROBEND UNCLAD SMF FOR MONITORING PH LEVEL IN AQUEOUS ENVIRONMENT

2020 JOURNAL

## 6. STUDY ON THE SENSITIVITY OF BARE FIBER BRAGG GRATING FOR ULTRASONIC FREQUENCIES RESPONSE UNDER VARIOUS TEMPERATURE

2020 PROCEEDING

## 7. E-COLI IDENTIFICATION USING KRETSCHMANN-BASED AG/GO NANOCOMPOSITES PLASMONIC SENSOR

2020 PROCEEDING

## 8. IDENTIFICATION OF NEAR-FIELD AND FAR-FIELD USING CONFOCAL MICROSCOPY SETUP FOR OPTICAL SENSING APPLICATIONS

2019 JOURNAL

## 9. EFFECT OF NOBLE METAL THIN FILM THICKNESSES ON SURFACE PLASMON RESONANCE (SPR) SIGNAL AMPLIFICATION

2018 JOURNAL

## 10. THEORETICAL STUDY ON HYBRID AMPLIFICATION OF 32-CHANNELS DWDM IN OPTICAL PARAMETRIC AMPLIFIERS

2018 JOURNAL

## 11. STUDY ON PLASMON ABSORPTION OF HYBRID AU-GO-GNP FILMS FOR SPR SENSING APPLICATION

2018 PROCEEDING

## 12. MAXIMIZING THE RESPONSE OF SPR SIGNAL: A VITAL ROLE OF LIGHT EXCITATION WAVELENGTH

2018 PROCEEDING

## 13. SPR SENSOR FOR DETECTION OF HEAVY METAL IONS: MANIPULATING THE EM WAVES POLARIZATION MODES

2017 JOURNAL

## 14. MANIPULATING MICROBENDING LOSSES IN SINGLE MODE OPTICAL FIBER FOR PRESSURE SENSING

2017 JOURNAL

## 15. OPTIMIZATION OF SPR SIGNALS: MONITORING THE PHYSICAL STRUCTURES AND REFRACTIVE INDICES OF PRISMS

2017 PROCEEDING

## 16. FABRICATION OF GOLD STRIP THIN FILM ON GLASS SUBSTRATE FOR PLASMONIC DEMODULATION APPLICATION

2015 PROCEEDING

## 17. ELECTRO-OPTICS INTERACTION IMAGING IN ACTIVE PLASMONIC DEVICES

2014 JOURNAL

## 18. GOLD NANOPARTICLES GROWN USING MODIFIED SEED-MEDIATED GROWTH TECHNIQUE.

2013 JOURNAL

## 19. INFLUENCES OF LIGHT COUPLING TECHNIQUES TO THE EXCITATION OF SURFACE PLASMON POLARITONS

2013 JOURNAL

## 20. ANGLE SHIFTING IN SURFACE PLASMON RESONANCE: EXPERIMENTAL AND THEORETICAL VERIFICATION

2013 JOURNAL

## 21. PROPAGATION OF SURFACE PLASMON WAVES AT METAL THIN FILM/AIR INTERFACE USING MODIFIED OPTICAL WAVEGUIDING ASSEMBLY.

2013 JOURNAL

## 22. EFFECT OF TAPER ANGLE OF THE OPTICAL FIBER MICROPROBE IN POWER COLLECTION

2012 JOURNAL

## 23. ?MICROFABRICATED FIBER PROBE BY COMBINATION OF ELECTRIC ARC DISCHARGE AND CHEMICAL ETCHING TECHNIQUES?, , HLM 462

2012 JOURNAL

## 24. ANALYSIS OF BICONICAL TAPER GEOMETRIES TO THE TRANSMISSION LOSSES IN OPTICAL MICROFIBERS

2012 JOURNAL

## 25. STUDY OF FRAUNHOFER DIFFRACTION PATTERN FROM A CIRCULAR APERTURE USING AN OPTICAL FIBER MICROPROBE?, , HLM 378-379

2012 JOURNAL

## 26. ANGLE SHIFTING IN SURFACE PLASMON RESONANCE: EXPERIMENTAL AND THEORETICAL VERIFICATION. JOURNAL OF PHYSICS: CONFERENCE SERIES, 431, HLM 012028

2012 PROCEEDING

## 27. EFFECT ON TAPER ANGLE OF OPTICAL FIBER MICROPROBE IN LIGHT DETECTION

2011 PROCEEDING

## 28. FABRICATION OF OPTICAL FIBER MICROPROBE USING ELECTRIC ARC HEATING AND ONE-SIDED PULLING TECHNIQUE. HLM 104.

2010 PROCEEDING

# CONSULTATION/ADULATION

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## 1. JOURNAL REVIEWER

2018 INTERNATIONAL -

## 2. BOOK REVIEWER

2018 UNIVERSITY PUSAT PENGURUSAN PENYELIDIKAN DAN INOVASI, USIM

## 3. JOURNAL REVIEWER

2017 INTERNATIONAL -

#### 4. CONFERENCE PROCEEDING REVIEWER

2017 INTERNATIONAL -

#### 5. JOURNAL REVIEWER

2016 INTERNATIONAL JOURNAL OF TELECOMMUNICATIONS, ELECTRONICS AND COMPUTER ENGINEERING

## AWARDS/RECOGNITION

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#### 1. FALL DETECTION SENSOR FOR ELDERLY

2026 Antarabangsa Bronze

#### 2. MULTISENSOR SYSTEM FOR BOXED DRINK QUALITY USING PH AND TURBIDITY SENSORS

2026 Antarabangsa Silver

#### 3. SMART STREET LIGHT SYSTEM USING ARDUINO UNO, LDR SENSOR AND IR MOTION SENSOR

2026 Antarabangsa Gold

#### 4. IOT BASED SMART PARKING SYSTEM SENSOR TECHNOLOGY

2026 Antarabangsa Gold

#### 5. SIJIL PENGHARGAAN MARKAH PRESTASI YANG CEMERLANG MELEBIHI 95 % DALAM LAPORAN NILAIAN PRESTASI TAHUNAN (LNPT) BAGI TAHUN 2024

2025 UNIVERSITY