



## PROF. MADYA DR. ERNIE SUZANA BINTI ALI

PENSYARAH UNIVERSITI DS14

### CONTACT

Phone: 6425

E-mail: ernie@usim.edu.my

Address: Fakulti Sains Dan  
Teknologi

### SUPERVISION

PhD - Completed: 1, Ongoing: 0

Master - Completed: 0, Ongoing: 0

### AREAS OF EXPERTISE

Polymer-based Composites

Bio-composites

Polymeric Adhesive, Coating And Ink

### BIOGRAPHY

A lecturer from Fakulti Sains Dan Teknologi. Holds a Phd in Sains Bahan.

### ACADEMIC QUALIFICATION

Phd in Sains Bahan (2008)

Master in Sains Bahan (2003)

Bachelor in Sains Bahan (2001)

### RESEARCH

1. ELUCIDATING THE STRUCTURE?FUNCTION RELATIONSHIPS IN BACTERIAL NANOCELULOSE?PEG COMPOSITES FOR FOOD PACKAGING

2026 ON GOING MAIN RESEARCHER

2. SUSTAINABLE SMART HYBRID NANOCOMPOSITES POLYURETHANE USING 4D PRINTING

2022 ON GOING MAIN RESEARCHER

3. MECHANISM OF SHAPE MEMORY PROPERTIES BY CELLULOSE NANOCRYSTAL (CNC) IN PALM OIL BASED POLYOL

2017 COMPLETED MAIN RESEARCHER

4. SMART COATING FROM PALM OIL BASED ACRYLIC-POLYURETHANE

2016 COMPLETED MAIN RESEARCHER

5. SELF SENSING ACTUATOR MADE FROM THE CELLULOSE NANOCRYSTAL (CNC) AND BIO-BASED SHAPE MEMORY POLYURETHANE (SMPU)

2012 COMPLETED MAIN RESEARCHER

**6. BIOCOMPATIBILITY OF BIO-BASED SHAPE MEMORY  
POLYURETHANE NANOCOMPOSITE FOR BIOMEDICAL APPLICATION**

2012 COMPLETED MAIN RESEARCHER

**7. STUDY ON THE ACTUATING MECHANISM OF SELF SENSING  
ACTUATOR MADE FROM THE PALM OIL BASED SHAPE MEMORY  
POLYURETHANE (SMPU)**

2011 COMPLETED MAIN RESEARCHER

**8. PRELIMINARY STUDY OF CAPROLACTONE/PALM KERNEL OIL  
BASED POLYOL FOR POLYURETHANE BIOADHESIVE**

2011 COMPLETED MAIN RESEARCHER

**9. FUNDAMENTAL STUDIES ON THE FABRICATION OF  
NANOPARTICLE MODIFIED GREEN POLYURETHANE ADHESIVES**

2009 COMPLETED MAIN RESEARCHER

**10. MECHANICAL AND THERMAL CHARACTERIZATION OF IN-HOUSE  
INSULATOR USING PALM OIL POLYOL AND KENAF, HIBIS**

2009 COMPLETED MAIN RESEARCHER

# PUBLICATION

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## 1. SUSTAINABLE SMART NANOCOMPOSITE POLYURETHANE

2024 JOURNAL

## 2. CONTACT ANGLE PROPERTIES OF BIOACRYLIC PALM OIL BASED POLYOL FOR POLYURETHANE COATING

2019 JOURNAL

## 3. CONTACT ANGLE PROPERTIES OF BIOACRYLIC PALM OIL BASED POLYOL FOR POLYURETHANE COATING

2018 PROCEEDING

## 4. HYBRID BIOFOAM USING CELLULOSE NANOCRYSTAL (CNC) AND NANOCCLAY

2017 JOURNAL

## 5. ELECTRICAL CONDUCTIVITY OF BIOBASED SHAPE MEMORY POLYURETHANE FILLED WITH CNT

2017 JOURNAL

## 6. THE MECHANICAL PROPERTIES OF MEDIUM DENSITY RIGID POLYURETHANE BIOFOAM

2016 JOURNAL

## 7. ELECTRICAL CONDUCTIVITY OF BIOBASED SHAPE MEMORY POLYURETHANE FILLED WITH CNT

2016 PROCEEDING

## 8. HYBRID BIONANOCOMPOSITE MADE FROM PALM OIL

2016 PROCEEDING

## 9. UTILIZATION OF PALM OIL TO SMART MATERIALS

2016 CHAPTER IN BOOK

## 10. THE MECHANICAL PROPERTIES OF MEDIUM DENSITY RIGID POLYURETHANE BIOFOAM

2015 PROCEEDING

## 11. SHAPE MEMORY BIOPOLYURETHANE

2014 CHAPTER IN BOOK

## 12. OER@USIM

2013 CHAPTER IN BOOK

## 13. BIONANOCOMPOSITE HYBRID POLYURETHANE FOAM REINFORCED WITH EMPTY FRUIT BUNCH AND NANOCCLAY

2012 JOURNAL

## 14. CLAY REINFORCED HYPERBRANCHED POLYURETHANE NANOCOMPOSITES BASED ON PALM OIL POLYOL AS SHAPE MEMORY MATERIALS

2012 JOURNAL

## 15. CROSSLINKING OF PALM OIL POLYOL BASED SHAPE MEMORY POLYURETHANE

2012 PROCEEDING

## 16. WEB 2.0@USIM

2012 CHAPTER IN BOOK

#### 17. PROMISING MATERIALS MADE OF BIO-HYBRID POLYURETHANE

2011 JOURNAL

#### 18. PROMISING MATERIALS MADE OF BIO-HYBRID POLYURETHANE

2011 PROCEEDING

#### 19. CLAY REINFORCED PALM OIL POLYOL/ POLYURETHANE SHAPE MEMORY NANOCOMPOSITES

2011 PROCEEDING

#### 20. BIONANOCOMPOSITE HYBRID FOAM:IT?S MECHANISME

2011 PROCEEDING

#### 21. NOVEL HYBRID NANOCOMPOSITE POLYURETHANE BIOFOAM: THERMAL AND FIRE BEHAVIOUR

2011 PROCEEDING

#### 22. HYBRID BIONANOCOMPOSITE POLYURETHANE FOAM

2011 CHAPTER IN BOOK

#### 23. BIONANOCOMPOSITE HYBRID POLYURETHANE FOAM REINFORCED WITH EMPTY FRUIT BUNCH AND NANOCCLAY

2010 PROCEEDING

#### 24. HYBRID BIOFOAM AS AN INSULATOR

2010 CHAPTER IN BOOK

## CONSULTATION/ADULATION

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#### 1. JURI

2017 NATIONAL MOSTI

#### 2. JOURNAL REVIEWER - INDUSTRIAL CROPS AND PRODUCTS

2014 INTERNATIONAL

#### 3. JOURNAL REVIEWER - MATERIALS LETTERS

2013 INTERNATIONAL ELSEVIER

#### 4. JOURNAL REVIEWER - INDUSTRIAL CROPS AND PRODUCTS

2013 INTERNATIONAL ELSEVIER

#### 5. E-LEARNING GUIDELINES FOR MALAYSIAN HEIS

2013 NATIONAL KPM

## AWARDS/RECOGNITION

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#### 1. ARTICLE ASSESSOR FOR AWARD

2025 UNIVERSITY

#### 2. TRAINER / FACILITATOR

2025 INTERNATIONAL

#### 3. TRAINER / FACILITATOR

2025 NATIONAL

#### 4. TRAINER / FACILITATOR

2025

NATIONAL

#### 5. ANUGERAH PEKERJA CEMERLANG 2022

2023

UNIVERSITY