



## PROF. MADYA DR. AZWANI SOFIA BINTI AHMAD KHIAR

PENSYARAH UNIVERSITI DS14

### CONTACT

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Address: Fakulti Sains Dan  
Teknologi

### SUPERVISION

PhD - Completed: 0, Ongoing: 0

Master - Completed: 4, Ongoing: 2

### AREAS OF EXPERTISE

Solid State And Polymer Electrolyte Physics

Polymer Electrolytes

Electrolytes For Batteries

### BIOGRAPHY

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

### ACADEMIC QUALIFICATION

Phd in Bahan Termaju (2006)

Bachelor in Fizik Komputer Dan Elektronik (2002)

### RESEARCH

1. TRANSPORT PROPERTIES OF CELLULOSE DERIVATIVES BASED POLYMER ELECTROLYTE DOPED WITH IONIC LIQUIDS USING SPECTROSCOPY METHODS

2023 ON GOING MAIN RESEARCHER

2. ELECTRICAL STUDIES OF RENEWABLE BIONANOCOMPOSITE BIOPOLYMER ELECTROLYTE FOR DYE SENSITIZED SOLAR CELL (DSSC) APPLICATION

2016 COMPLETED MAIN RESEARCHER

3. CHARACTERIZATION OF DEEP EUTETIC SOLVENT (DES) - DOPED CHITOSAN BASED POLYMER ELECTROLYTE FRO SOLAR CELL APPLICATION

2013 COMPLETED MAIN RESEARCHER

4. ELECTRICAL STUDIES OF LAUROYL-CHITOSAN BLEND POLYMER ELECTROLYTES FOR APPLICATION IN LITHIUM BATTERY

2012 COMPLETED MAIN RESEARCHER

5. THE STUDY OF SOLID POLYMER ELECTROLYTES FROM BIOPOLYMERS

2008 COMPLETED MAIN RESEARCHER

## 6. DEVELOPMENT OF SOLID ELECTROLYTES USING NATURAL POLYMERS

2007

COMPLETED

MAIN RESEARCHER

# PUBLICATION

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1. EFFECT OF BMITFSI TO THE ELECTRICAL PROPERTIES OF CHITOSAN/METHYLCELLULOSE BASED POLYMER ELECTROLYTE

2018 JOURNAL

2. CONDUCTIVITY, DIELECTRIC AND MODULUS STUDIES OF METHYLCELLULOSE-NH<sub>4</sub>TF POLYMER ELECTROLYTE

2018 JOURNAL

3. CONDUCTIVITY STUDIES OF METHYL CELLULOSE/CHITOSAN/1-BUTYL-3-METHYL IMIDAZOLIUM BIS(TRIFLUORO SULFONYL) IMIDE DOPED WITH AMMONIUM TRIFLATE BASED POLYMER ELECTROLYTE

2018 PROCEEDING

4. COLOR STABILITY AND CORROSION RESISTIVITY OF NATURAL DYE COATING PAINT FILM CONSISTING OF CURCUMIN

2017 JOURNAL

5. EFFECT OF 1-ETHYL-3-METHYLIMIDAZOLIUM NITRATE ON THE ELECTRICAL PROPERTIES OF STARCH/CHITOSAN BLEND POLYMER ELECTROLYTE

2016 JOURNAL

6. ELECTRICAL PROPERTIES OF STARCH/PEO BLEND POLYMER ELECTROLYTES.

2015 JOURNAL

7. ELECTRICAL PROPERTY OF METHYLCELLULOSE/CHITOSAN-NH<sub>4</sub>NO<sub>3</sub>-EC PLASTICIZED POLYMER ELECTROLYTE

2015 JOURNAL

8. EFFECT OF BMITFSI TO THE ELECTRICAL PROPERTIES OF METHYLCELLULOSE/CHITOSAN/NH<sub>4</sub>TF BASED POLYMER ELECTROLYTE

2015 PROCEEDING

9. EFFECT OF LICF<sub>3</sub>SO<sub>3</sub> ON L-CHITOSAN/PMMA BLEND POLYMER ELECTROLYTES

2014 JOURNAL

10. CONDUCTIVITY AND DIELECTRIC STUDIES OF METHYLCELLULOSE/CHITOSAN-NH<sub>4</sub>CF<sub>3</sub>SO<sub>3</sub> POLYMER ELECTROLYTE

2014 JOURNAL

11. CONDUCTIVITY AND DIELECTRIC BEHAVIOUR STUDIES OF LICF<sub>3</sub>SO<sub>3</sub> DISSOCIATION IN L-CHITOSAN/PMMA-BASED POLYMER ELECTROLYTES.

2013 JOURNAL

12. CONDUCTIVITY AND DIELECTRIC BEHAVIOUR STUDIES OF LICF<sub>3</sub>SO<sub>3</sub> DISSOCIATION IN L-CHITOSAN/PMMA-BASED POLYMER ELECTROLYTES

2012 PROCEEDING

13. CONDUCTIVITY AND DIELECTRIC BEHAVIOR STUDIES OF STARCH/PEO + X WT% NH<sub>4</sub>NO<sub>3</sub> POLYMER ELECTROLYTE

2011 JOURNAL

14. ELECTRICAL PROPERTIES OF STARCH/CHITOSAN-NH<sub>4</sub>NO<sub>3</sub> POLYMER ELECTROLYTE

2011 JOURNAL

15. TRANSPORT AND AC IMPEDANCE STUDIES OF PLASTICIZED-CHITOSAN BASED POLYMER ELECTROLYTES

2011 JOURNAL

#### 16. CONDUCTIVITY STUDIES OF STARCH-BASED POLYMER ELECTROLYTES

2010 JOURNAL

#### 17. CONDUCTIVITY AND DIELECTRIC BEHAVIOR STUDIES OF STARCH/PEO + X WT% NH<sub>4</sub>NO<sub>3</sub> POLYMER ELECTROLYTE

2010 PROCEEDING

#### 18. NATURAL POLYMERS: ALTERNATIVE RESOURCES FOR THE DEVELOPMENT OF POLYMER ELECTROLYTES.

2009 PROCEEDING

#### 19. EFFECT OF STARCH/CHITOSAN BLEND TO THE PERFORMANCE ON A SOLID STATE CELL

2009 PROCEEDING

#### 20. EFFECT OF ADDITIVE TO AMMONIUM NITRATE DOPED STARCH BASED POLYMER ELECTROLYTE

2009 PROCEEDING

#### 21. THE ELECTRICAL BEHAVIOR OF STARCH-BASED POLYMER ELECTROLYTES

2007 JOURNAL

#### 22. PLASTICIZED-CHITOSAN BASED POLYMER ELECTROLYTES.

2007 PROCEEDING

#### 23. CONDUCTIVITY STUDIES OF A CHITOSAN-BASED POLYMER ELECTROLYTE.

2006 JOURNAL

#### 24. IONIC HOPPING TRANSPORT IN CHITOSAN-BASED POLYMER ELECTROLYTES

2006 JOURNAL

#### 25. CHARACTERIZATIONS OF CHITOSAN-AMMONIUM TRIFLATE (NH<sub>4</sub>CF<sub>3</sub>SO<sub>3</sub>) COMPLEXES BY FTIR AND IMPEDANCE SPECTROSCOPY

2006 JOURNAL

## CONSULTATION/ADULATION

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#### 1. PENILAIAN PEMATUHAN SYARAT-SYARAT AKREDITASI SEMENTARA DIPLOMA SAINS SECARA KERJASAMA DENGAN UITM (MQA/FA 7207)

2020 NATIONAL AGENSI KELAYAKAN MALAYSIA

#### 2. PANEL PENILAI AKREDITASI PENUH PROGRAM DOKTOR FALSAFAH UNIVERSITI MALAYSIA PAHANG

2019 NATIONAL AGENSI KELAYAKAN MALAYSIA

#### 3. PANEL PENILAI PENILAIAN PEMATUHAN AKREDITASI PENUH PROGRAM

2019 NATIONAL AGENSI KELAYAKAN MALAYSIA

#### 4. PENILAI PROGRAM 'DIPLOMA IN SCIENCE' SECARA KERJASAMA DENGAN UITM (MQA/FA 7207)

2018 NATIONAL AGENSI KELAYAKAN MALAYSIA

#### 5. PELANTIKAN SEBAGAI AUDITOR UNTUK AUDIT AKREDITASI PENUH/AUDIT VERIFIKASI PROGRAM IJAZAH SARJANA MUDA SAINS DAN IJAZAH SAINS MUDA SAINS GUNAAN DI PUSAT PENGAJIAN SAINS FIZIK, USM

2018 NATIONAL UNIVERSITI SAINS MALAYSIA

## AWARDS/RECOGNITION

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### 1. CELF BIOFILM GREEN ELECTROLYTE FOR PROTON BATTERY

2023 Antarabangsa Silver

### 2. CELF BIO-FILM: GREEN ELECTROLYTE FOR PROTON BATTERY

2023 Antarabangsa Gold

### 3. CELF, GREEN CONDUCTING ELECTROLYTE

2023 Antarabangsa Silver

### 4. ACADEMIC ADVISOR

2022 NATIONAL

### 5. CELF BIOFILM: PROTON CONDUCTING CELLULOSE BASED ELECTROLYTES

2022 Universiti Gold