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Address: Fakulti Sains Dan
Teknologi

SUPERVISION

PhD - Completed: 1, Ongoing: 4

Master - Completed: 0, Ongoing: 5

AREAS OF EXPERTISE

Semiconductor Materials And Devices Physics

Other Polymer And Polymeric Materials N.e.c

Material Physics

BIOGRAPHY

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

ACADEMIC QUALIFICATION

Phd in Advanced Materials (2006)

Bachelor in Computational Physics And Electronics (2002)

RESEARCH

1. ENHANCING IONIC CONDUCTING PROPERTIES OF 2-HYDROXYETHYL CELLULOSE-BASED POLYMERS VIA AMMONIUM FORMATE DOPING PROCESS FOR ENERGY STORAGE APPLICATION

2023 ON GOING MAIN RESEARCHER

2. IMMITTANCE RESPONSES AND IONIC CONDUCTION MECHANISM STUDIES OF ENHANCED CMC SOLID BIOPOLYMER ELECTROLYTES VIA FTIR DECONVOLUTION APPROACH

2019 COMPLETED MAIN RESEARCHER

PUBLICATION

1. DEVELOPMENT OF CELLULOSE-BASED FILMS CONTAINING SALICYLIC ACID FOR WOUND DRESSING APPLICATIONS: FABRICATION, PROPERTIES AND IN VITRO ASSESSMENT

2024 JOURNAL

2. CONTRIBUTION OF STILBENE-IMINE ADDITIVES ON THE STRUCTURAL, IONIC CONDUCTIVITY PERFORMANCE AND THEORETICAL EVALUATION ON CMC-BASED BIOPOLYMER ELECTROLYTES

2020 JOURNAL

3. NATURAL INSPIRED CARBOXYMETHYL CELLULOSE (CMC) DOPED WITH AMMONIUM CARBONATE (AC) AS BIOPOLYMER ELECTROLYTE

2020 JOURNAL

4. ELECTRICAL BEHAVIOR OF ETHYLENE CARBONATE-PLASTICIZED CELLULOSE BIOPOLYMER ELECTROLYTE FILMS

2020 JOURNAL

5. BIOPOLYMER MEMBRANES FOR BATTERY APPLICATIONS

2020 CHAPTER IN BOOK

6. INVESTIGATION ON TRANSPORT AND THERMAL STUDIES OF SOLID POLYMER ELECTROLYTE BASED ON CARBOXYMETHYL CELLULOSE DOPED AMMONIUM THIOCYANATE FOR POTENTIAL APPLICATION IN ELECTROCHEMICAL DEVICES

2019 JOURNAL

7. 2-HYDROXYETHYL CELLULOSE AS NATURAL BINDER IN ELECTRODES FOR SOLID-STATE PROTON BATTERY: CONSTRUCTION AND PRELIMINARY RESULTS

2018 JOURNAL

8. CONDUCTION MECHANISM VIA CORRELATED BARRIER HOPPING IN EC-PLASTICIZED 2-HYDROXYETHYL CELLULOSE-AMMONIUM NITRATE SOLID POLYMER ELECTROLYTE

2018 JOURNAL

9. IONIC CONDUCTION STUDY OF 2-HYDROXYETHYL CELLULOSE DOPED WITH DODECYLTRIMETHYL AMMONIUM BROMIDE SOLID BIOPOLYMER ELECTROLYTES

2018 JOURNAL

10. CONDUCTION MECHANISM VIA CORRELATED BARRIER HOPPING IN EC-PLASTICIZED 2-HYDROXYETHYL CELLULOSE-AMMONIUM NITRATE SOLID POLYMER ELECTROLYTE

2018 JOURNAL

11. X-RAY DIFFRACTION AND INFRARED SPECTROSCOPIC ANALYSIS OF SOLID BIOPOLYMER ELECTROLYTES BASED ON DUAL BLEND CARBOXYMETHYL CELLULOSE-CHITOSAN DOPED WITH AMMONIUM BROMIDE

2018 JOURNAL

12. IONIC CONDUCTIVITY AND STRUCTURAL ANALYSIS OF 2-HYDROXYETHYL CELLULOSE DOPED WITH GLYCOLIC ACID SOLID BIOPOLYMER ELECTROLYTES FOR SOLID PROTON BATTERY

2018 JOURNAL

13. CARBOXYMETHYL CELLULOSE ? AMMONIUM CHLORIDE ON ELECTRICAL OF PLASTICIZED PROPYLENE CARBONATE SOLID BIO-POLYMER ELECTROLYTES (SBPS) USING EXPERIMENTAL AND COMPUTATIONAL STUDIES

2018 JOURNAL

14. IONIC CONDUCTIVITY AND CONDUCTION MECHANISM STUDIES ON CELLULOSE BASED SOLID POLYMER ELECTROLYTES DOPED WITH AMMONIUM CARBONATE.

2017 JOURNAL

15. CHARACTERIZATION OF POLYETHYLENE GLYCOL PLASTICIZED CARBOXYMETHYL CELLULOSE-AMMONIUM FLUORIDE SOLID BIOPOLYMER ELECTROLYTES.

2017 JOURNAL

16. SOLID POLYMER ELECTROLYTE PRODUCTION FROM 2-HYDROXYETHYL CELLULOSE: EFFECT OF AMMONIUM NITRATE COMPOSITION ON ITS STRUCTURAL PROPERTIES

2017 JOURNAL

17. SOLID BIOPOLYMER ELECTROLYTES BASED ON CARBOXYMETHYL CELLULOSE FOR USE IN COIN CELL PROTON BATTERIES.

2017 JOURNAL

18. STRUCTURAL AND IONIC CONDUCTIVITY STUDIES ON PROTON CONDUCTING SOLID BIOPOLYMER ELECTROLYTE BASED ON 2-HYDROXYETHYL CELLULOSE INCORPORATED DTAB.

2017 JOURNAL

19. STUDIES OF IONIC CONDUCTIVITY AND A.C. CONDUCTION MECHANISM OF 2-HYDROXYETHYL CELLULOSE BASED SOLID POLYMER ELECTROLYTES.

2017 JOURNAL

20. TRANSPORT STUDIES OF CARBOXY METHYL CELLULOSE/CHITOSAN-AMMONIUM BROMIDE BIOPOLYMER BLEND ELECTROLYTES AS AN IONIC CONDUCTOR.

2017 JOURNAL

21. AN ENHANCEMENT ON ELECTRICAL PROPERTIES OF CARBOXYMETHYL CELLULOSE-NH₄BR BASED BIOPOLYMER ELECTROLYTES THROUGH IMPEDANCE CHARACTERIZATION.

2017 JOURNAL

22. ANALYSES OF IONIC CONDUCTIVITY AND DIELECTRIC BEHAVIOR OF SOLID POLYMER ELECTROLYTE BASED 2-HYDROXYETHYL CELLULOSE DOPED AMMONIUM NITRATE PLASTICIZED WITH ETHYLENE CARBONATE

2017 JOURNAL

23. THE EFFECT OF IONIC CHARGE CARRIERS IN 2-HYDROXYETHYL CELLULOSE SOLID BIOPOLYMER ELECTROLYTES DOPED GLYCOLIC ACID VIA FTIR-DECONVOLUTION TECHNIQUE.

2017 JOURNAL

24. CHARACTERIZATION OF PROTON CONDUCTING CARBOXYMETHYL CELLULOSE/CHITOSAN DUAL-BLEND BASED BIOPOLYMER ELECTROLYTES

2016 JOURNAL

25. IONIC CONDUCTIVITY AND ELECTRICAL PROPERTIES OF CARBOXYMETHYL CELLULOSE - NH₄CL SOLID POLYMER ELECTROLYTES

2016 JOURNAL

26. NOVEL PROTON CONDUCTING SOLID BIO-POLYMER ELECTROLYTES BASED ON CARBOXYMETHYL CELLULOSE DOPED WITH OLEIC ACID AND PLASTICIZED WITH GLYCEROL

2016 JOURNAL

27. CHARACTERIZATION OF UN-PLASTICIZED AND PROPYLENE CARBONATE PLASTICIZED CARBOXYMETHYL CELLULOSE DOPED AMMONIUM CHLORIDE SOLID BIOPOLYMER ELECTROLYTES

2016 JOURNAL

28. STRUCTURAL AND IONIC TRANSPORT PROPERTIES OF PROTONIC CONDUCTING SOLID BIOPOLYMER ELECTROLYTES BASED ON CARBOXYMETHYL CELLULOSE DOPED WITH AMMONIUM FLUORIDE

2016 JOURNAL

29. EFFECT OF AMMONIUM CARBONATE SALT CONCENTRATION ON STRUCTURAL AND IONIC CONDUCTIVITY OF CELLULOSE BASED SOLID POLYMER ELECTROLYTES

2015 JOURNAL

30. IONIC CONDUCTIVITY AND CONDUCTION MECHANISM OF BIODEGRADABLE DUAL POLYSACCHARIDES BLEND ELECTROLYTES

2015 JOURNAL

31. CONDUCTIVITY AND DIELECTRIC ANALYSIS OF CELLULOSE BASED SOLID POLYMER ELECTROLYTES DOPED WITH AMMONIUM CARBONATE (NH_4CO_3)

2015 JOURNAL

32. STRUCTURAL AND CONDUCTION STUDIES OF SOLID BIOPOLYMER ELECTROLYTES SYSTEM BASED ON CARBOXYMETHYL CELLULOSE

2015 JOURNAL

33. IONIC CONDUCTION MECHANISM OF SOLID BIODEGRADABLE POLYMER ELECTROLYTES BASED CARBOXYMETHYL CELLULOSE DOPED AMMONIUM THIOCYANATE

2015 JOURNAL

34. SOLID BIOPOLYMER ELECTROLYTES BASED CARBOXYMETHYL CELLULOSE DOPED WITH AMMONIUM FLUORIDE: IONIC TRANSPORT AND CONDUCTION MECHANISM

2015 JOURNAL

35. CONDUCTION MECHANISM OF SOLID BIOPOLYMER ELECTROLYTES SYSTEM BASED ON CARBOXYMETHYL CELLULOSE ? AMMONIUM CHLORIDE

2015 JOURNAL

36. ELECTRICAL STUDIES OF CARBOXY METHYLCELLULOSE - CHITOSAN BLEND BIOPOLYMER DOPED DODECYLTRIMETHYL AMMONIUM BROMIDE SOLID ELECTROLYTES

2015 JOURNAL

37. IONIC CONDUCTIVITY AND STRUCTURAL ANALYSIS OF CARBOXYLMETHYL CELLULOSE DOPED WITH AMMONIUM FLUORIDE AS SOLID BIOPOLYMER ELECTROLYTES

2015 JOURNAL

38. PROTON CONDUCTING SOLID POLYMER ELECTROLYTES BASED CARBOXYMETHYL CELLULOSE DOPED AMMONIUM CHLORIDE: IONIC CONDUCTIVITY AND TRANSPORT STUDIES

2015 JOURNAL

39. EFFECT OF ADIPIC ACID COMPOSITION ON STRUCTURAL AND CONDUCTIVITY SOLID BIOPOLYMER ELECTROLYTES BASED ON CARBOXY METHYLCELLULOSE STUDIES.

2015 JOURNAL

40. INVESTIGATION OF THE IONIC CONDUCTION MECHANISM IN CARBOXYMETHYL CELLULOSE/CHITOSAN BIOPOLYMER BLEND ELECTROLYTE IMPREGNATED WITH AMMONIUM NITRATE

2015 JOURNAL

41. INTERACTION BETWEEN CARBOXY METHYLCELLULOSE AND SALICYLIC ACID SOLID BIOPOLYMER ELECTROLYTES.

2015 JOURNAL

42. IONIC CONDUCTIVITY VIA QUANTUM MECHANICAL TUNNELING IN NH_4NO_3 DOPED CARBOXYMETHYL CELLULOSE SOLID BIOPOLYMER ELECTROLYTES

2015 JOURNAL

43. IONIC CONDUCTIVITY AND DIELECTRIC PROPERTIES OF CMC DOPED NH_4SCN SOLID BIOPOLYMER ELECTROLYTES.

2015 JOURNAL

44. STRUCTURAL AND IONIC CONDUCTIVITY STUDIES OF CMC BASED POLYMER ELECTROLYTES DOPED WITH NH₄CL

2015 JOURNAL

45. STRUCTURAL STUDY OF PLASTICIZED CARBOXY METHYLCELLULOSE BASED SOLID BIOPOLYMER ELECTROLYTES.

2015 JOURNAL

46. CONDUCTION MECHANISM OF ENHANCED CMC/NH₄BR BIOPOLYMER ELECTROLYTES.

2015 JOURNAL

CONSULTATION/ADULATION

1. PELANTIKAN SEBAGAI PANEL KONSORTIUM KECEMERLANGAN PENYELIDIKAN (KKP) 2023-2024

2023 NATIONAL JABATAN PENDIDIKAN TINGGI

2. KNOWLEDGE TRANSFER PROGRAMME-KTP

2019 NATIONAL KEMENTERIAN PENDIDIKAN MALAYSIA

3. PANEL KENAIKAN PANGKAT AHLI AKADEMIK UMT

2019 NATIONAL UNIVERSITI MALAYSIA TERENGGANU

AWARDS/RECOGNITION

1. SEMARAK INTERNATIONAL RESEARCH INNOVATION SYMPOSIUM IVCATEGORY: APPLIED SCIENCES AND ADVANCED TECHNOLOGY / ENGINEERING

2025 INTERNATIONAL

2. ANUGERAH KHAS KETUA JABATAN / TOKOH AKADEMIK

2025 UNIVERSITY

3. ANUGERAH PENYELIA TERBILANG

2025 UNIVERSITY

4. ANUGERAH PENINGKATAN SITASI PENYELIDIKAN TERTINGGI (10 TERBAIK)

2025 UNIVERSITY

5. ANUGERAH PENCAPAIAN RPI TERTINGGI (10 TERBAIK)

2025 UNIVERSITY