Profile Image

PROF. TS. DR. MOHD IKMAR NIZAM BIN MOHAMAD ISA

PENSYARAH UNIVERSITI GRED KHAS C

CONTACT

PHONE
78740

E-MAIL
ikmar_isa@usim.edu.my

FACULTY
Fakulti Sains Dan Teknologi

SUPERVISION

	COMPLETED	ONGOING
PhD	1	4
Master	0	5

AREAS OF EXPERTISE

- Semiconductor Materials And Devices Physics
- Other Polymer And Polymeric Materials N.e.c
- Material Physics

ACADEMIC QUALIFICATION

2006 **PhD** - Advanced Materials

2002 **Bachelor** - Computational Physics And Electronics

RESEARCH

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

2023 | GERAN PENYELIDIKAN PENTADBIR | ON GOING | MAIN RESEARCHER

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

2019 | GERAN PENYELIDIKAN USIM | COMPLETED | MAIN RESEARCHER

PUBLICATION

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

JOURNAL OF BIOACTIVE AND COMPATIBLE POLYMERS

2024 JOURNAL ERA MAIN AUTHOR

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

CARBOHYDRATE POLYMERS

2020 JOURNAL ISI, SCOPUS AND ERA MAIN AUTHOR

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

POLYMERS

2020 JOURNAL ERA MAIN AUTHOR

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

MALAYSIAN JOURNAL OF CHEMISTRY

2020 JOURNAL SCOPUS MAIN AUTHOR

5. BIOPOLYMER MEMBRANES FOR BATTERY APPLICATIONS

BIOPOLYMER MEMBRANES AND FILMS: HEALTH, FOOD, ENVIRONMENT, AND ENERGY APPLICATIONS.

2020 CHAPTER IN BOOK MAIN AUTHOR

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

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY

2019 JOURNAL ISI, SCOPUS AND ERA MAIN AUTHOR

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

ASM SCIENCE JOURNAL SPECIAL ISSUE

2018 JOURNAL SCOPUS MAIN AUTHOR

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

MATERIALS SCIENCE AND ENGINEERING

2018 JOURNAL SCOPUS MAIN AUTHOR

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

JOURNAL OF SUSTAINABILITY SCIENCE AND MANAGEMENT

2018 JOURNAL SCOPUS MAIN AUTHOR

PUBLICATION

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

IOP CONFERENCE SEREIES: MATERIALS SCIENCE AND ENGINEERING

2018 JOURNAL SCOPUS MAIN AUTHOR

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

ASM SCIENCE JOURNAL SPECIAL ISSUE

2018 JOURNAL SCOPUS MAIN AUTHOR

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

IOP CONFERENCE SEREIES: MATERIALS SCIENCE AND ENGINEERING

2018 JOURNAL SCOPUS MAIN AUTHOR

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

PHOSPHORUS, SULFUR, AND SILICON

2018 JOURNAL SCOPUS MAIN AUTHOR

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

POLYMER BULLETIN

2017 JOURNAL SCOPUS MAIN AUTHOR

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

AIP CONFERENCE PROCEEDINGS

2017 JOURNAL SCOPUS MAIN AUTHOR

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

CARBOHYDRATE POLYMERS

2017 JOURNAL WOS MAIN AUTHOR

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

JOURNAL OF SUSTAINABILITY SCIENCE AND MANAGEMENT SPECIAL ISSUE

2017 JOURNAL SCOPUS MAIN AUTHOR

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

AIP CONFERENCE PROCEEDINGS

2017 JOURNAL SCOPUS MAIN AUTHOR

PUBLICATION

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

JOURNAL OF SUSTAINABILITY SCIENCE AND MANAGEMENT SPECIAL ISSUE

2017 JOURNAL SCOPUS MAIN AUTHOR

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

JOURNAL OF SUSTAINABILITY SCIENCE AND MANAGEMENT SPECIAL ISSUE

2017 JOURNAL SCOPUS MAIN AUTHOR

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

INTERNATIONAL JOURNAL OF POLYMER ANALYSIS AND CHARACTERIZATION

2017 JOURNAL SCOPUS MAIN AUTHOR

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

AIP CONFERENCE PROCEEDINGS.

2017 JOURNAL SCOPUS MAIN AUTHOR

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

JOURNAL OF SUSTAINABILITY SCIENCE AND MANAGEMENT SPECIAL ISSUE

2017 JOURNAL SCOPUS MAIN AUTHOR

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

MATERIALS SCIENCE FORUM

2016 JOURNAL SCOPUS MAIN AUTHOR

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

JOURNAL OF ENGINEERING SCIENCE AND TECHNOLOGY

2016 JOURNAL SCOPUS MAIN AUTHOR

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

SCIENTIFIC REPORTS

2016 JOURNAL WOS MAIN AUTHOR

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

CARBOHYDRATE POLYMERS

2016 JOURNAL WOS MAIN AUTHOR

PUBLICATION

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

THE JOURNAL OF PHYSICAL CHEMISTRY B

2016 JOURNAL WOS MAIN AUTHOR

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

FIBERS AND POLYMERS

2015 JOURNAL SCOPUS MAIN AUTHOR

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

AMERICAN-EURASIAN JOURNAL OF SUSTAINABLE AGRICULTURE

2015 JOURNAL SCOPUS MAIN AUTHOR

31. CONDUCTIVITY AND DIELECTRIC ANALYSIS OF CELLULOSE BASED SOLID POLYMER ELECTROLYTES DOPED WITH AMMONIUM CARBONATE (NH4CO3)

APPLIED MECHANICS AND MATERIALS

2015 JOURNAL SCOPUS MAIN AUTHOR

32. STRUCTURAL AND CONDUCTION STUDIES OF SOLID BIO PLOYMER ELECTROLYTES SYSTEM BASED ON CARBOXYMETYL CELLULOSE

AMERICAN-EURASIAN JOURNAL OF SUSTAINABLE AGRICULTURE

2015 JOURNAL SCOPUS MAIN AUTHOR

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

APPLIED MECHANICS AND MATERIALS

2015 JOURNAL SCOPUS MAIN AUTHOR

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

POLYMERS FROM RENEWABLE RESOURCES

2015 JOURNAL SCOPUS MAIN AUTHOR

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

AMERICAN-EURASIAN JOURNAL OF SUSTAINABLE AGRICULTURE

2015 JOURNAL SCOPUS MAIN AUTHOR

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

AMERICAN JOURNAL OF APPLIED SCIENCES

2015 JOURNAL SCOPUS MAIN AUTHOR

PUBLICATION

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

AMERICAN-EURASIAN JOURNAL OF SUSTAINABLE AGRICULTURE

2015 JOURNAL SCOPUS MAIN AUTHOR

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

INTERNATIONAL JOURNAL OF PLASTICS TECHNOLOGY

2015 JOURNAL SCOPUS MAIN AUTHOR

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

AMERICAN-EURASIAN JOURNAL OF SUSTAINABLE AGRICULTURE

2015 JOURNAL SCOPUS MAIN AUTHOR

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

INTERNATIONAL JOURNAL OF POLYMER ANALYSIS AND CHARACTERIZATION

2015 JOURNAL SCOPUS MAIN AUTHOR

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

42. IONIC CONDUCTIVITY VIA QUANTUM MECHANICAL TUNNELING IN NH4NO3 DOPED CARBOXYMETHYL CELLULOSE SOLID BIOPOLYMER ELECTROLYTES

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

43. IONIC CONDUCTIVITY AND DIELECTRIC PROPERTIES OF CMC DOPED NH4SCN SOLID BIOPOLYMER ELECTROLYTES.

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

PUBLICATION

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

CONSULTATION

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

JABATAN PENDIDIKAN TINGGI

2023 NATIONAL

2. KNOWLEDGE TRANSFER PROGRAMME-KTP

KEMENTERIAN PENDIDIKAN MALAYSIA

2019 NATIONAL

3. PANEL KENAIKAN PANGKAT AHLI AKADEMIK UMT

UNIVERSITI MALAYSIA TERENGGANU

2019 NATIONAL

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