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. ELUCIDATING THE IMPACT OF CALCIUM OXIDE (CAO) FORMATION IN EGGSHELL-DERIVED HYDROXYAPATITE (HA) ON DRUG LOADING, RELEASE KINETICS, AND ANTIBACTERIAL EFFICACY

2026 | GERAN PENYELIDIKAN FUNDAMENTAL | ON GOING | CO-RESEARCHER

2. EVALUATION OF THE ROLE OF DOPING COMPOSITION IN ZNO/C ANODE MATERIALS FOR PROTON BATTERIES: INSIGHTS FROM STRUCTURAL TO CONDUCTIVITY INVESTIGATIONS

2024 | GERAN KPT | ON GOING | CO-RESEARCHER

3. 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

4. TRANSPORT PROPERTIES OF CELLULOSE DERIVATIES BASED POLYMER ELECTROLYTE DOPED WITH IONIC LIQUIDS USING SPECTROSCOPY METHODS

2023 | GERAN KPT | ON GOING | CO-RESEARCHER

5. 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. SYNTHESIS, CHARACTERIZATION, ADMET, IN SILICO MOLECULAR DOCKING, BIOLOGICAL ACTIVITY OF NEW OXAZEPINE DERIVATIVES

JOURNAL OF MOLECULAR STRUCTURE

2026 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

2. STRUCTURAL, ELECTRICAL, AND OPTICAL PROPERTIES OF GUAR GUM?BASED MG2+ION CONDUCTING BIOPOLYMER BLEND ELECTROLYTES

IONICS

2025 JOURNAL OTHER DATABASE CO-AUTHOR

3. THE EFFECT OF NH4BR COMPOSITION ON ELECTRICAL BEHAVIOUR OF 2-HYDROXYETHYL CELLULOSE SOLID BIOPOLYMER ELECTROLYTES

JOURNAL OF ADVANCED RESEARCH IN FLUID MECHANICS AND THERMAL SCIENCES

2025 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

4. THE INFLUENCE OF AMMONIUM FORMATE CONCENTRATION ON THE ELECTRICAL PERFORMANCE OF 2-HYDROXYETHYL CELLULOSE SOLID BIOPOLYMER ELECTROLYTES

JOURNAL OF ADVANCED RESEARCH IN FLUID MECHANICS AND THERMAL SCIENCES

2025 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

5. EFFECT OF DYE EXTRACTION FROM MANGOSTEEN PERICARP WITH DIFFERENT EXTRACTION SOLVENTS FOR DSSC FABRICATION OF DYE EXTRACTION FROM MANGOSTEEN PERICARP WITH DIFFERENT EXTRACTION SOLVENTS FOR DSSC FABRICATION

APPLIED MECHANICS AND MATERIALS

2025 JOURNAL SCOPUS CO-AUTHOR

6. PREPARATION AND CHARATERIZATION OF RICE HUSK BIOCHAR-BASED CHEMICAL ACTIVATED CARBON IN VARYING PARTICLE SIZE

KARYA INTERNATIONAL JOURNAL OF BIOFUEL AND BIOENERGY

2025 JOURNAL OTHER DATABASE CO-AUTHOR

7. SYNTHESIS AND CHARACTERIZATION OF ANODIC ALUMINA OXIDE USING OXALIC ACID AS ELECTROLYTE SOLUTION

APPLIED MECHANICS AND MATERIALS

2025 JOURNAL OTHER DATABASE CO-AUTHOR

8. STRUCTURAL STUDY OF 2?HYDROXYETHYL CELLULOSE (2HEC) SOLID BIOPOLYMER ELECTROLYTE DOPED WITH NH4BR: EFFECT ON IONIC CONDUCTIVITY

IONICS INTERNATIONAL JOURNAL OF IONICS ? THE SCIENCE AND TECHNOLOGY OF IONIC MOTION

2025 JOURNAL SCOPUS CORRESPONDING AUTHOR

9. PREPARATION AND CHARACTERIZATION OF RICE HUSK BIOCHAR-BASED CHEMICAL ACTIVATED CARBON IN VARYING PARTICLE SIZE

KARYA INTERNATIONAL JOURNAL OF BIOFUEL AND BIOENERGY

2025 JOURNAL MYCITE CORRESPONDING AUTHOR

PUBLICATION

10. CRYSTAL STRUCTURE, HIRSHFELD SURFACE ANALYSIS AND IONIC CONDUCTION PROPERTIES OF 4-(DIPHENYLAMINO)BENZALDEHYDE-4-(METHYL)THIOSEMICARBAZONE ADDITIVE WITH D-?-D MOLECULAR ARRANGEMENT SYSTEM

JOURNAL OF ALLOYS AND COMPOUNDS

2024 JOURNAL ERA CO-AUTHOR

11. IONIC CONDUCTIVITY STUDIES ON PROTON CONDUCTING SOLID BIOPOLYMER ELECTROLYTE BASED ON 2-HYDROXYETHYL CELLULOSE (2HEC) DOPED WITH AMMONIUM CHLORIDE (NH4CL)

IONICS

2024 JOURNAL ISI, SCOPUS AND ERA CORRESPONDING AUTHOR

12. 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

13. INVESTIGATIONS ON ELECTRICAL, ELECTROCHEMICAL, AND THERMAL PROPERTIES OF GELATINE?BASED NOVEL BIOPOLYMER ELECTROLYTES FOR ENERGY STORAGE APPLICATIONS

IONICS

2024 JOURNAL ISI, SCOPUS AND ERA CO-AUTHOR

14. STRUCTURAL INVESTIGATION OF SOLID BIOPOLYMER ELECTROLYTES: 2-HYDROXYETHYL CELLULOSE DOPED AMMONIUM FORMATE AS A PROMISING PROTON CONDUCTOR

ADVANCES IN POLYMER TECHNOLOGY

2024 JOURNAL ERA CO-AUTHOR

15. CORROSION INHIBITION STUDY OF CARBOXYMETHYL CELLULOSEIONIC LIQUID VIA ELECTROCHEMICAL AND MACHINE LEARNING TECHNIQUE

MALAYSIAN JOURNAL OF ANALYTICAL SCIENCES

2024 JOURNAL SCOPUS CO-AUTHOR

16. THE INFLUENCE OF VARYING AR/O2 GAS RATIO WITH CATALYST-FREE GROWTH BY HOMEMADE THERMAL EVAPORATION TECHNIQUE

JOURNAL OF ADVANCED RESEARCH IN FLUID MECHANICS AND THERMAL SCIENCES

2024 JOURNAL OTHER DATABASE CO-AUTHOR

17. CARBOXYMETHYL CELLULOSE?AMMONIUM FORMATE BIOPOLYMER ELECTROLYTE: IONIC CONDUCTIVITY AND ELECTRICAL PROPERTIES

JOURNAL OF ADVANCED IN FLUID MECHANICS AND THERMAL SCIENCES

2024 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

18. CHARACTERIZATION OF FREEZE-DRIED GINGER SLICES WITH CARBOXYMETHYL CELLULOSE AS POTENTIAL COATING MATERIAL PRIOR TO OSMOTIC DEHYDRATION

FOOD RESEARCH

2023 JOURNAL SCOPUS CO-AUTHOR

PUBLICATION

19. SURFACE MODIFICATION VIA ALGINATE-BASED EDIBLE COATING FOR ENHANCED OSMOTIC DEHYDRATION MASS TRANSFER OF GINGER GINGER SLICES

PLANT SCIENCE TODAY

2023 JOURNAL SCOPUS CO-AUTHOR

20. A REVIEW STUDY OF BINARY AND TERNARY ZNO/C COMPOSITES AS ANODES FOR HIGH-CAPACITY LITHIUM-ION BATTERIES

IONICS

2023 JOURNAL ISI, SCOPUS AND ERA CO-AUTHOR

21. FUSED AROMATIC DISUBSTITUTED AZOMETHINE AS ORGANIC ADDITIVES IN NH4SCN DOPED CMC BASED ELECTROLYTE FILM

THE 1ST INTERNATIONAL CONFERENCE OF CHEMICAL SCIENCE, ENGINEERING AND TECHNOLOGY

2023 PROCEEDING SCOPUS CO-AUTHOR

22. DENSITY FUNCTIONAL THEORY (DFT) CALCULATIONS, SYNTHESIS AND ELECTRONIC PROPERTIES OF ALKOXYLATED-CHALCONE ADDITIVE IN ENHANCING THE PERFORMANCE OF CMC-BASED SOLID BIOPOLYMER ELECTROLYTE

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY

2022 JOURNAL ISI, SCOPUS AND ERA CO-AUTHOR

23. IMPROVING IONIC CONDUCTIVITY OF CARBOXYMETHYL CELLULOSE SOLID BIOPOLYMER ELECTROLYTE WITH ASSIST FROM DIMETHYL CARBONATE

WALAILAK JOURNAL OF SCIENCE AND TECHNOLOGY

2022 JOURNAL SCOPUS CORRESPONDING AUTHOR

24. PLASTICIZED CMC-AMMONIUM ACETATE BASED SOLID BIOPOLYMER ELECTROLYTE: IONIC CONDUCTIVITY AND TRANSPORT STUDY

JOURNAL OF SUSTAINABILITY SCIENCE AND MANAGEMENT

2022 JOURNAL SCOPUS CORRESPONDING AUTHOR

25. 2-HYDROXYETHYL CELLULOSE-AMMONIUM THIOCYANATE SOLID BIOPOLYMER ELECTROLYTES: IONIC CONDUCTIVITY AND DIELECTRIC STUDIES

JOURNAL OF SUSTAINABILITY SCIENCE AND MANAGEMENT

2022 JOURNAL SCOPUS CO-AUTHOR

26. PHYSICAL, MECHANICAL AND ANTIOXIDANT PROPERTIES OF CHICKEN SKIN GELATIN FILMS INCORPORATED WITH VIRGIN COCONUT OIL

BIOCATALYSIS AND AGRICULTURAL BIOTECHNOLOGY

2022 JOURNAL SCOPUS CO-AUTHOR

27. SURFACE MODIFICATION VIA ALGINATE-BASED EDIBLE COATING FOR ENHANCED OSMOTIC DEHYDRATION MASS TRANSFER OF GINGER SLICES

PLANT SCIENCE TODAY

2022 JOURNAL OTHER DATABASE CO-AUTHOR

PUBLICATION

28. PROTON-CONDUCTING BIOPOLYMER ELECTROLYTES BASED ON CARBOXYMETHYL CELLULOSE DOPED WITH AMMONIUM FORMATE

POLYMERS

2022 JOURNAL ERA CORRESPONDING AUTHOR

29. PREDICTION OF CORROSION INHIBITION EFFICIENCY VIA MULTILAYER PERCEPTRON

4TH NOVEL INTELLIGENT AND LEADING EMERGING SCIENCES CONFERENCE

2022 PROCEEDING SCOPUS CO-AUTHOR

30. CARBOXYMETHYL CELLULOSE PLASTICIZED POLYMER APPLICATION AS BIO-MATERIAL IN SOLID-STATE HYDROGEN IONIC CELL

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY

2021 JOURNAL ISI, SCOPUS AND ERA MAIN AUTHOR / CONTACT PERSON IN USIM

31. EFFECTS OF PROCESS VARIABLES ON MASS TRANSFER DURING OSMOTIC DEHYDRATION OF GINGER SLICES USING CARBOXYMETHYL CELLULOSE AS AN EDIBLE COATING MATERIAL

JOURNAL OF SUSTAINABILITY SCIENCE AND MANAGEMENT

2020 JOURNAL SCOPUS CO-AUTHOR

32. 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

33. CARBOXYMETHYL CELLULOSE PLASTICIZED POLYMER APPLICATION AS BIO-MATERIAL IN SOLID-STATE HYDROGEN IONIC CELL

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY

2020 JOURNAL ISI, SCOPUS AND ERA MAIN AUTHOR / CONTACT PERSON IN USIM

34. CORRELATION BETWEEN STRUCTURAL, ION TRANSPORT AND IONIC CONDUCTIVITY OF PLASTICIZED 2-HYDROXYETHYL CELLULOSE BASED SOLID BIOPOLYMER ELECTROLYTE

JOURNAL OF MEMBRANE SCIENCE

2020 JOURNAL ERA CORRESPONDING AUTHOR

35. CHARACTERISATION OF BIODEGRADABLE PROTEIN BASED FILMS FROM GELATIN ALTERNATIVE: A REVIEW

INTERNATIONAL FOOD RESEARCH JOURNAL

2020 JOURNAL ISI AND SCOPUS MAIN AUTHOR / CONTACT PERSON IN USIM

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

POLYMERS

2020 JOURNAL ERA MAIN AUTHOR

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

MALAYSIAN JOURNAL OF CHEMISTRY

2020 JOURNAL SCOPUS MAIN AUTHOR

PUBLICATION

38. EFFECT OF DRYING TEMPERATURE ON ELECTRICAL IMPEDANCE CHARACTERISTIC OF GINGER SLICES

INTERNATIONAL AGROPHYSICS

2020 JOURNAL ISI CO-AUTHOR

39. CORROSION RESISTANCE EVALUATION OF ACRYLIC COATING INCORPORATED WITH HENNA LEAVES EXTRACT

JOURNAL OF ENGINEERING

2020 JOURNAL WOS CO-AUTHOR

40. BIOPOLYMER MEMBRANES FOR BATTERY APPLICATIONS

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

2020 CHAPTER IN BOOK MAIN AUTHOR

41. PREPARATION AND CHARACTERIZATION OF BIOPOLYMER ELECTROLYTES BASED ON PECTIN AND NANO3 FOR BATTERY APPLICATIONS

POLYMER SCIENCE SERIES A

2019 JOURNAL ISI CO-AUTHOR

42. EFFECT OF IONIC LIQUID BMIMNO3 TO CHITOSAN-STARCH BLEND BIOPOLYMER ELECTROLYTE SYSTEM

SOLID STATE PHENOMENA

2019 JOURNAL SCOPUS CO-AUTHOR

43. AN INTERACTION MODE OF N-(DECYLOXYPHENYL)-N?-(4-CHLOROBENZOYL)THIOUREA DOPANT IN CARBOXYMETHYL CELLULOSE (CMC) FOR SOLID POLYMER ELECTROLYTE.

EUROPEAN CHEMICAL BULLETIN

2019 JOURNAL ERA CO-AUTHOR

44. 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

45. MECHANICAL PROPERTIES OF CARBOXYMETHYL CELLULOSE-OLEIC ACID SOLID BIOPOLYMER ELECTROLYTE

MATERIALS SCIENCE FORUM

2018 JOURNAL SCOPUS CO-AUTHOR

46. THE EFFECT OF PLASTICIZERS ON THE FUNCTIONAL PROPERTIES OF BIODEGRADABLE GELATIN-BASED FILM: A REVIEW

FOOD BIOSCIENCE

2018 JOURNAL SCOPUS CO-AUTHOR

47. LIGHTWEIGHT AND FLEXIBLE SOLID-STATE EDLC BASED ON OPTIMIZED CMC-NH4NO3 SOLID BIO-POLYMER ELECTROLYTE

ASM SCIENCE JOURNAL SPECIAL ISSUE

2018 JOURNAL SCOPUS CO-AUTHOR

PUBLICATION

48. ELECTRICAL AND STRUCTURAL STUDIES OF POLYMER ELECTROLYTE BASED ON CHITOSAN/METHYL CELLULOSE BLEND DOPED WITH BMIMTFSI

MATERIALS RESEARCH EXPRESS

2018 JOURNAL SCOPUS CO-AUTHOR

49. EFFECT OF HNO3$\square$ CONCENTRATION ON ETCH RATE AND STRUCTURE OF SI WAFER ETCHED IN THE MIXTURE OF HF AND HNO3 SOLUTIONS

ASM SCIENCE JOURNAL SPECIAL ISSUE

2018 JOURNAL SCOPUS CO-AUTHOR

50. SYNTHESIS AND ELECTRICAL CONDUCTIVITY OF N-(3-(TRIFLUOROMETHYL)BENZYLIDINE)THIOSEMICARBAZIDE TOWARDS DYES SENSITIZED SOLAR CELL

DEFECT AND DIFFUSION FORUM

2018 JOURNAL SCOPUS CO-AUTHOR

51. 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

52. 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

53. 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

54. RHEOLOGICAL, FUNCTIONAL AND ANTIOXIDANT PROPERTIES OF FILMS FORMING SOLUTION AND ACTIVE GELATIN FILLMS INCORPORATED WITH CENTELLA ASIATICA (L.) URBAN EXTRACT

FOOD PACKAGING AND SHELF LIFE

2018 JOURNAL SCOPUS CO-AUTHOR

55. CHARACTERIZATION ON THE MECHANICAL AND PHYSICAL PROPERTIES OF CHICKEN SKIN GELATIN FILMS IN COMPARISON TO MAMMALIAN GELATIN FILMS

IOP CONFERENCE SEREIES: MATERIALS SCIENCE AND ENGINEERING

2018 JOURNAL SCOPUS CO-AUTHOR

56. 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

PUBLICATION

57. 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

58. 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

59. 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

60. HENNA LEAVES EXTRACT AS A CORROSION INHIBITOR IN ACRYLIC RESIN COATING

PROGRESS IN ORGANIC COATINGS

2017 JOURNAL WOS CO-AUTHOR

61. PREPARATION AND CHARACTERIZATION OF CHICKEN SKIN GELATIN/CMC COMPOSITE FILM AS COMPARED TO BOVINE GELATIN FILM

FOOD BIOSCIENCE

2017 JOURNAL SCOPUS CO-AUTHOR

62. THE EFFECT OF CONCENTRATION OF LAWSONIA INERMIS AS A CORROSION INHIBITOR FOR ALUMINUM ALLOY IN SEAWATER

ADVANCES IN PHYSICAL CHEMISTRY

2017 JOURNAL SCOPUS CO-AUTHOR

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

POLYMER BULLETIN

2017 JOURNAL SCOPUS MAIN AUTHOR

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

AIP CONFERENCE PROCEEDINGS

2017 JOURNAL SCOPUS MAIN AUTHOR

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

CARBOHYDRATE POLYMERS

2017 JOURNAL WOS MAIN AUTHOR

PUBLICATION

66. SYNTHESIS AND ELECTRICAL CONDUCTIVITY OF N-(3-(TRIFLUOROMETHYL)BENZYLIDINE) THIOSEMICARBAZIDE TOWARDS DYES SENSITIZED SOLAR CELL

DEFECT AND DIFFUSION FORUM

2017 JOURNAL SCOPUS CO-AUTHOR

67. 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

68. 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

69. EFFECT OF SORBITOL AT DIFFERENT CONCENTRATIONS ON THE FUNCTIONAL PROPERTIES OF GELATIN/CARBOXYMETHYL CELLULOSE (CMC)/CHITOSAN COMPOSITE FILMS

INTERNATIONAL FOOD RESEARCH JOURNAL

2017 JOURNAL SCOPUS CO-AUTHOR

70. 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

71. 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

72. 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

73. 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

74. 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

PUBLICATION

75. STUDY ON SEMICONDUCTOR PROPERTIES OF ACETYLIDE-THIOUREA FABRICATED ONTO INTERDIGITATED ELECTRODES (IDES) PLATFORM TOWARDS APPLICATION IN GAS SENSING TECHNOLOGY

MAKARA JOURNAL OF TECHNOLOGY

2017 JOURNAL OTHER DATABASE CO-AUTHOR

76. DEVELOPMENT OF LOW COST BLOCK MOLD FOR COPPER ALLOY CASTING

JURNAL TEKNOLOGI

2016 JOURNAL SCOPUS CO-AUTHOR

77. CONDUCTIVITY STUDY ON PLASTICIZED SOLID BIO-ELECTROLYTES CMC-NH4BR AND APPLICATION IN SOLID-STATE PROTON BATTERIES

JURNAL TEKNOLOGI

2016 JOURNAL SCOPUS CO-AUTHOR

78. THICKNESS DEPENDENT ON ENERGY BAND GAP AND ELECTRICAL CONDUCTIVITY OF UNDOPED CONJUGATED POLYMER THIN FILMS.

MATERIALS SCIENCE FORUM

2016 JOURNAL SCOPUS CO-AUTHOR

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

MATERIALS SCIENCE FORUM

2016 JOURNAL SCOPUS MAIN AUTHOR

80. EFFECT OF XANTHAN GUM ON THE PHYSICAL AND MECHANICAL PROPERTIES OF GELATIN-CARBOXYMETHYL CELLULOSE FILM BLENDS.

FOOD PACKAGING AND SHELF LIFE

2016 JOURNAL SCOPUS CO-AUTHOR

81. PREPARATION AND PHYSICAL PROPERTIES OF GELATIN/CMC/CHITOSAN COMPOSITE FILMS AS AFFECTED BY DRYING TEMPERATURE

INTERNATIONAL FOOD RESEARCH JOURNAL

2016 JOURNAL SCOPUS CO-AUTHOR

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

JOURNAL OF ENGINEERING SCIENCE AND TECHNOLOGY

2016 JOURNAL SCOPUS MAIN AUTHOR

83. EFFECT OF DRYING TEMPERATURE ON THE FUNCTIONAL PROPERTIES OF BIODEGRADABLE CMC-BASED FILM FOR POTENTIAL FOOD PACKAGING.

INTERNATIONAL FOOD RESEARCH JOURNAL

2016 JOURNAL SCOPUS CO-AUTHOR

PUBLICATION

84. 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

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

CARBOHYDRATE POLYMERS

2016 JOURNAL WOS MAIN AUTHOR

86. POTENTIAL STUDY OF BIO-POLYMER BASED CARBOXY METHYLCELLULOSE ELECTROLYTES SYSTEM FOR SOLID STATE BATTERY APPLICATION. INTERNATIONAL

JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS

2016 JOURNAL SCOPUS CO-AUTHOR

87. 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

88. ETCHING TIME EFFECT ON PHOTOLUMINESCENCE, POROSITY, SURFACE MORPHOLOGY AND CONDUCTIVITY OF POROUS SILICON

EDUCATUM JSMT

2016 JOURNAL OTHER DATABASE CO-AUTHOR

89. 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

90. THE EFFECT OF DEWAXING AND BURNOUT TEMPERATURE IN BLACK MOLD PROCESS FOR COPPER ALLOY CASTING

INTERNATIONAL JOURNAL OF ENGINEERING AND TECHNOLOGY (IJET)

2015 JOURNAL SCOPUS CO-AUTHOR

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

AMERICAN-EURASIAN JOURNAL OF SUSTAINABLE AGRICULTURE

2015 JOURNAL SCOPUS MAIN AUTHOR

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

APPLIED MECHANICS AND MATERIALS

2015 JOURNAL SCOPUS MAIN AUTHOR

PUBLICATION

93. 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

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

APPLIED MECHANICS AND MATERIALS

2015 JOURNAL SCOPUS MAIN AUTHOR

95. POROSITY AND STRENGTH PROPERTIES OF GYPSUM BONDED INVESTMENT USING TERENGGANU LOCAL SILICA FOR COPPER ALLOYS CASTING

JOURNAL OF ENGINEERING SCIENCE AND TECHNOLOGY

2015 JOURNAL SCOPUS CO-AUTHOR

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

POLYMERS FROM RENEWABLE RESOURCES

2015 JOURNAL SCOPUS MAIN AUTHOR

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

AMERICAN-EURASIAN JOURNAL OF SUSTAINABLE AGRICULTURE

2015 JOURNAL SCOPUS MAIN AUTHOR

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

AMERICAN JOURNAL OF APPLIED SCIENCES

2015 JOURNAL SCOPUS MAIN AUTHOR

99. 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

100. 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

101. 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

PUBLICATION

102. 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

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

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

ADVANCED MATERIALS RESEARCH

2015 JOURNAL OTHER DATABASE MAIN AUTHOR

108. 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

CONSULTATION

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

6. ANUGERAH PENERBITAN JURNAL BERINDEKS WOS/SCOPUS/MYCITE TERTINGGI

2025 UNIVERSITY

7. ANUGERAH PENERBITAN JURNAL BERINDEKS WOS/SCOPUS/MYCITE

2025 UNIVERSITY

8. ANUGERAH PENERBITAN JURNAL Q1

2025 UNIVERSITY

9. ACADEMIC ADVISOR

KEMENTERIAN PENDIDIKAN TINGGI

2025 NATIONAL

10. ACADEMIC ADVISOR

UNIVERSITI MALAYA

2025 NATIONAL

11. ACADEMIC ADVISOR

UNIVERSITI MALAYSIA TERENGGANU

2025 NATIONAL

AWARDS/RECOGNITION

12. ANUGERAH SITASI TERTINGGI (TAHUN SEMASA) KLUSTER SAINS, TEKNOLOGI DAN PERUBATAN

2024 UNIVERSITY

13. ANUGERAH SITASI TERTINGGI (TAHUN SEMASA) KLUSTER SAINS, TEKNOLOGI DAN PERUBATAN

2024 UNIVERSITY

14. ANUGERAH PERKHIDMATAN CEMERLANG 2023

2024 UNIVERSITY

15. ANUGERAH PENERIMA GERAN PENYELIDIKAN

2024 UNIVERSITY

16. ANUGERAH PERKHIDMATAN CEMERLANG TAHUN 2023

2024 UNIVERSITY

17. ANUGERAH PENERBITAN JURNAL BERINDEKS WOS/SCOPUS/MYCITE

2024 UNIVERSITY

18. ANUGERAH PENCAPAIAN RPI TERTINGGI

2024 UNIVERSITY

19. ANUGERAH PEMFAILAN HARTA INTELEK

2024 UNIVERSITY

20. ANUGERAH PENYELIA POPULAR

2024 UNIVERSITY

21. ANUGERAH PENERBITAN PROSIDING BERINDEKS WOS/SCOPUS

2024 UNIVERSITY

22. ANUGERAH SITASI TERTINGGI SAINS DAN TEKNOLOGI, USIM

2024 UNIVERSITY

23. NEXCEL: NEXT GENERATION BIO-BASED ENERGY STORAGE SOLUTION

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024 UNIVERSITI SILVER

24. CELIX: PIONEERING CELLUOSE-BASED BIOFILM FOR A GREENER FUTURE

SCEINCE AND TECHNOLOGY RESEARCH EXPO (SCITEX)

2024 UNIVERSITI GOLD

25. BIO-HYYCE CONDUCTING FILM ELECTROLYTES

SCEINCE AND TECHNOLOGY RESEARCH EXPO (SCITEX)

2024 UNIVERSITI GOLD

AWARDS/RECOGNITION

26. ANUGERAH PENERIMA GERAN PENYELIDIKAN

Majlis Anugerah Kecemerlangan & Penghargaan Fakulti Sains & Teknologi Tahun 2023

2024 UNIVERSITI CERTIFICATE OF APPRECIATION

27. ANUGERAH PENERBITAN PROSIDING BERINDEKS WOS/SCOPUS

Majlis Anugerah Kecemerlangan & Penghargaan Fakulti Sains & Teknologi Tahun 2023

2024 UNIVERSITI CERTIFICATE OF APPRECIATION

28. ANUGERAH PENERBITAN JURNAL BERINDEKS WOS/SCOPUS/MYCITE

Majlis Anugerah Kecemerlangan & Penghargaan Fakulti Sains & Teknologi Tahun 2023

2024 UNIVERSITI CERTIFICATE OF APPRECIATION

29. ANUGERAH PENCAPAIAN RPI TERTINGGI

Majlis Anugerah Kecemerlangan & Penghargaan Fakulti Sains & Teknologi Tahun 2023

2024 UNIVERSITI CERTIFICATE OF APPRECIATION

30. ANUGERAH PEMFAILAN HARTA INTELEK

Majlis Anugerah Kecemerlangan & Penghargaan Fakulti Sains & Teknologi Tahun 2023

2024 UNIVERSITI CERTIFICATE OF APPRECIATION

31. ANUGERAH SITASI TERTINGGI (TAHUN SEMASA) KLUSTER SAINS, TEKNOLOGI DAN PERUBATAN

MAJLIS APRESIASI PENYELIDIKAN DAN INOVASI PPPI

2024 UNIVERSITI CERTIFICATE OF APPRECIATION

32. CELF BIOFILM GREEN ELECTROLYTE FOR PROTON BATTERY

Malaysia Technology Expo (MTE) 2023

2023 ANTARABANGSA SILVER

33. CELF BIO-FILM: GREEN ELECTROLYTE FOR PROTON BATTERY

34th INTERNATIONAL INVENTION & TECHNOLOGY EXHIBITION MALAYSIA (ITEX2023)

2023 ANTARABANGSA GOLD

34. GREEN BIOFILM ELECTROLYTE FOR A SAFER BATTERY

3rd Graduate Digital Invention, Innovation & Design (GDIID) 2023

2023 KEBANGSAAN SILVER

35. HYDRA SOLID BIOPOLYMER ELECTROLYTE

International Research & Innovative Technology Competition (i-RITEC) 2023

2023 ANTARABANGSA SILVER

36. HY-CAMBRO BIOFILM ELECTROLYTES

International Research & Innovative Technology Competition (i-RITEC) 2023

2023 ANTARABANGSA SILVER

AWARDS/RECOGNITION

37. HYDRA GREEN BIOFILM ELECTROLYTE FOR SAFER BATTERY

SCIENCE AND TECHNOLOGY RESERACH EXPO (SCITEX@20TH FST)

2023 UNIVERSITI BRONZE

38. THE ROLE OF PLASTICIZER IN ENHANCING GREEN ELECTROLYTE FOR SOLID-STATE BATTERY

SCIENCE AND TECHNOLOGY RESERACH EXPO (SCITEX@20TH FST)

2023 UNIVERSITI BRONZE

39. BIOFILM, A SAFER CHOICE FOR FUTURE BATTERY

VIRTUAL INNOVATION CEMPETITION 2023

2023 KEBANGSAAN SILVER

40. HYDRA, A BIO-FILM ELECTROLYT

INVENTION, INNOVATION & DESIGN EXPOSITION 2023 (IIDEX 2023)

2023 ANTARABANGSA SILVER

41. HY-CAMBRO BIOFILM ELECTROLYTE

INVENTION, INNOVATION & DESIGN EXPOSITION 2023 (IIDEX 2023)

2023 ANTARABANGSA SILVER

42. CELF, GREEN CONDUCTING ELECTROLYTE

INVENTION, INNOVATION & DESIGN EXPOSITION 2023 (IIDEX 2023)

2023 ANTARABANGSA SILVER

43. CELF BIOFILM: PROTON CONDUCTING CELLULOSE BASED ELECTROLYTES

INNOVATION BANK CHALLENGE (IBC 2022)

2022 UNIVERSITI GOLD

44. ACADEMIC ADVISOR

3RD SYMPOSIUM ON INDUSTRIAL SCIENCE AND TECHNOLOGY 2021 (SISTEC 2021)

2021 INTERNATIONAL

45. ACADEMIC ADVISOR

JABATAN PENDIDIKAN TINGGI, KEMENTERIAN PENGAJIAN TINGGI

2020 NATIONAL

46. SYCOP2.0 : SYNTHETIC CONDUCTIVE POLYMER 2.0

MINGGU PENYELIDIKAN & INOVASI 2019 UNISZA

2019 UNIVERSITI SILVER

47. CMC COATED OSMO-FREEZE DRIED ZINGIBER OFFICINALE SLICES

MINGGU PENYELIDIKAN & INOVASI 2019 UNISZA

2019 UNIVERSITI GOLD

AWARDS/RECOGNITION

48. SYCOP 2.0 : SYNTHETIC CONDUCTIVE POLYMER 2.0

INTERNATIONAL FESTIVAL OF INNOVATION ON GREEN TECHNOLOGY 2019 (IFINOG) & IDEAS

2019 ANTARABANGSA SILVER

49. SYNERGISTIC EFFECT OF PVDF-COATED FIBERS AS EFFECTIVE OIL SORBENTS

30th INTERNATIONAL INVENTION, INNOVATION & TECHNOLOGY EXHIBITION 2019 (ITEX 2019)

2019 ANTARABANGSA GOLD

50. UMTCOP : UNIVERSITI MALAYSIA TERENGGANU CONDUCTIVE POLYMER

INTERNATIONAL CONFERENCE AND EXPOSITION ON INVENTIONS BY INSTITUTIONS OF HIGHER LEARNING (PECIPTA 20

2019 ANTARABANGSA SILVER

51. EDD MOBILEAPPS : INTERACTIVE TEACHING & LEARNING TOWARDS EDUCATION 4.0

K-NOVASI PENGAJARAN DAN PEMBELAJARAN UKM

2019 KEBANGSAAN SILVER

52. EDD MOBILEAPPS : INTERACTIVE TEACHING & LEARNING TOWARDS EDUCATION 4.0

PERTANDINGAN AMALAN INOVASI PENGAJARAN DAN PEMBELAJARAN (AIPP 2018)

2018 UNIVERSITI SILVER

53. VISITING PROFESOR

KOREA INVENTION ACADEMY (KIA)

2016 INTERNATIONAL