

Curriculum Vitae (CV)



ASSOC. PROF. TS. DR. MIOR AHMAD KHUSHAIRI BIN MOHD ZAHARI

Faculty of Chemical and Process Engineering Technology,

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Google Scholar h-index: 13 (Total Citations: 960)

<https://scholar.google.com/citations?hl=en&user=4RQMSgYAAAAJ>

Scopus h-index: 12 (Total Citations: 664) (Scopus ID #: 59261427000)

<https://www.scopus.com/authid/detail.uri?authorId=59261427000>

WoS h-index: 11 (Total Citations: 535) (ResearcherID: L-1716-2013)

<https://www.webofscience.com/wos/author/record/L-1716-2013?state=%7B%7D>

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<https://orcid.org/0000-0002-5856-8067>

ResearchGate

https://www.researchgate.net/profile/Mior_Ahmad_Khushairi_Mohd_Zahari2/stats/report/weekly/2019-02-10

BIOGRAPHY

Ts. Dr. Mior Ahmad Khushairi Mohd Zahari (Zahari, M.A.K.M., well known as Assoc. Prof. Ts. Dr. Mior) is an accomplished academic and researcher with a strong background in Chemical Engineering, Chemistry, and Bioprocess Engineering. He currently holds the position of **Associate Professor** at the **Faculty of Chemical & Process Engineering Technology** within the **College of Engineering Technology** at **Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA)**.

He was born in Batu Gajah, Perak, Malaysia. He completed his primary education at Sekolah Rendah Kebangsaan Sultan Yussof, Batu Gajah, Perak, and continued his secondary school at Sekolah Menengah Sains Teluk Intan, Perak. Mior Ahmad Khushairi's educational journey includes obtaining a **Bachelor's degree in Chemical Engineering in 1999** and a **Master's degree in Chemistry in 2003**, both from **Universiti Teknologi Malaysia**. His academic pursuits demonstrate a multidisciplinary approach, which is further highlighted by his later achievement of a **Ph.D. in Bioprocess Engineering** from **Universiti Putra Malaysia (UPM)** in **2013**.

A commitment to environmental concerns and the practical application of research has characterised his career path. He began his career as an **Environmental Control Officer at the Department of Environment (DOE)** after completing his Master's degree. In 2005, he transitioned to academia, becoming a lecturer at **Universiti Malaysia Pahang Al-Sultan Abdullah**. His expertise in bioprocess engineering and environmental biotechnology has led to the leadership of numerous research projects, resulting in the acquisition of substantial research grant funding. His dedication to project completion and the potential for impactful outcomes have been instrumental in securing these research grants.

Mior Ahmad Khushairi's contributions to the academic community extend beyond research. He has **authored over 40 publications**, demonstrating his commitment to sharing knowledge and contributing to the scholarly discourse in his field. His research output is notable, with a **Scopus H-index of 12** and a substantial number of citations, reflecting the influence of his work.

In addition to his academic achievements, Mior Ahmad Khushairi is a member of various professional organisations, including the **Malaysia Board of Technologists (MBOT)**, the **Board of Engineers Malaysia**, the **Energy Institute (UK)**, and the **Asian Federation of Biotechnology (AFOB)**. These affiliations underscore his commitment to professional development and engagement within his field.

Overall, Mior Ahmad Khushairi Mohd Zahari stands as an esteemed figure in **Chemical Engineering, Environmental Biotechnology, and Bioprocess Engineering**, with a noteworthy academic background, impactful research contributions, and active involvement in professional organisations.

PERSONAL BACKGROUND

PERSONAL BACKGROUND

Name : Mior Ahmad Khushairi bin Mohd Zahari

DOB : 04 October 1976

Family status : Married (5 children)

LANGUAGE PROFICIENCY

- Bahasa Malaysia : Native language
- English : Fluent

EDUCATION BACKGROUND

- PhD in Bioprocess Engineering, UPM, Malaysia. 2013
Title: **‘Oil Palm Frond Juice as a Novel and Renewable Substrate for Production of Poly(3-hydroxybutyrate) Bioplastic’**
- M.Sc. (Chemistry - Biotechnology), UTM, Malaysia. 2003
Title: **‘Enhanced Gold Recovery from Mine Tailings using Continuous Stirred Tank Reactor (CSTR)’**
- B.Eng. (Chem. Eng), UTM, Malaysia. 1999

PROFESSIONAL EXPERIENCE

- Head of Program (Bachelor in Chemical Engineering). Sept. 2015 – Dec. 2019
- Head of Program (Diploma in Chemical Engineering). Jan. 2013 – Aug. 2015
- Assoc. Prof. Universiti Malaysia Pahang. 14 Aug. 2019 – present
- Senior Lecturer. Universiti Malaysia Pahang. 15 Aug. 2013 – 13 Aug. 2019
- Lecturer. Universiti Malaysia Pahang. Jan. 2005 – Jul. 2013
- Head of Research & Development Unit at FKKSA, Universiti Malaysia Pahang. 2007
- Final Year Project Coordinator. 2005 – 2006
- Committee Member for Engineering Accreditation Council (EAC) Report for FKKSA, Universiti Malaysia Pahang. 2005 – 2006.
- Environmental Control Officer (Air Division) at Department of Environment, Putrajaya (June 2003 – Dec. 2004)
- Research Assistant at the Faculty of Science, UTM Skudai (June 2000 – Dec. 2000)
- Production Supervisor at Zhong Xing Plastic Injection Molding Sdn. Bhd., Taman Universiti Industrial Park, Skudai, Johor (Feb. 2000 – May 2000)

- Chemical Engineer at Pan Century Edible Oils (M) Sdn. Bhd., Pasir Gudang, Johor (Aug. 1999 – Nov. 1999)
- Industrial Trainee, attached to Wastewater Treatment Plant at Penang Seagate Ind. (M) Sdn. Bhd., Ipoh, Perak (Oct. 1997 – March 1998)

MEMBERSHIPS

- Professional Technologist of Malaysia Board of Technologists (MBOT). (Reg. #: PT18040131)
- Graduate Member. Board of Engineers Malaysia (BEM). (Reg. #: 54592R)
- Member of Asian Federation of Biotechnology (AFOB). (Reg. #: MY00059)
- Member of Energy Institute (EI). (Reg. #: 0064870)

ACADEMIC AWARDS & SPONSORSHIPS

- SLAI, Malaysian Government Full Scholarship for PhD Study.
- UTM-PTP Scholarship for M.Sc. Study.
- Yayasan Tenaga Nasional, TNB Full Scholarship for Undergraduate Study.
- SILVER MEDAL at CREATION, INNOVATION, TECHNOLOGY & RESEARCH EXPOSITION (CITREx 2013) UNIVERSITI MALAYSIA PAHANG (STAFF CATEGORY)
- SILVER MEDAL at CREATION, INNOVATION, TECHNOLOGY & RESEARCH EXPOSITION (CITREx 2014) UNIVERSITI MALAYSIA PAHANG (STAFF CATEGORY)
- CENDEKIA BITARA AWARD (ACB2012) – JOURNAL PUBLICATION CATEGORY
- APPRECIATION PRIZE (2013) – JOURNAL PUBLICATION CATEGORY
- CENDEKIA BITARA AWARD (ACB2014) – JOURNAL PUBLICATION CATEGORY
- EXCELLENT SERVICE AWARD 2014 – UNIVERSITY MALAYSIA PAHANG
- SILVER MEDAL at MALAYSIA TECHNOLOGY EXPO 2015 (12-14 FEB. 2015), PWTC, KUALA LUMPUR.
- Gold medal at PECIPTA 2015, 4 – 6 December 2015, Novel fuel additive from oil palm sap
- Novel Fuel Additives Chemical from Oil Palm Sap. InventHelps (INPEX 2016), Pittsburgh, Pennsylvania, USA. (Received Gold Merit Award)
- BRONZE MEDAL at CREATION, INNOVATION, TECHNOLOGY & RESEARCH EXPOSITION (CITREx 2016) UNIVERSITI MALAYSIA PAHANG (STUDENT CATEGORY)

- SILVER MEDAL at International Festival Innovation on Green Technology (i-FINOG 2016) UNIVERSITI MALAYSIA PAHANG (STUDENT CATEGORY)
- SILVER MEDAL at CREATION, INNOVATION, TECHNOLOGY & RESEARCH EXPOSITION (CITREx 2018) UNIVERSITI MALAYSIA PAHANG (STAFF CATEGORY)
- BRONZE MEDAL at CREATION, INNOVATION, TECHNOLOGY & RESEARCH EXPOSITION (CITREx 2019) UNIVERSITI MALAYSIA PAHANG (STUDENT CATEGORY)

TEACHING & LEARNING

SUBJECTS TAUGHT

- Process Control & Dynamics
- Material & Energy Balance
- Process & Plant Design
- Air Pollution (E)
- Basic Engineering Lab
- Organic Chemistry
- Engineering Mechanics
- Thermodynamics
- Fuel Cell Technology (E)
- Heat Transfer
- Mass Transfer
- Plant Safety and Health
- Environmental Engineering Lab
- OSH in Chemical Industries
- OSH in Chemical & Biotechnology Industries
- Chemical Plant Safety
- Oleochemical Technology (E)

UNDERGRADUATE RESEARCH PROJECT (URP) AND PLANT DESIGN (PD) PROJECT SUPERVISION

- URP students:-
 1. Mohd Azrul Hisyam bin Mohd Norawi
 2. Mohd Shuib Mohd Hassan
 3. Salimah binti Shafii
 4. David a/l Joseph
 5. Suhaiza binti Hj. Kassim
 6. Asong Angkat
 7. Mohd Amiruddin bin Abdullah
 8. Dhiyatul Ridhwan bin Md. Nasarudin
 9. Syaza Afifah binti Rosley
 10. Faatihah binti Mohamad Asri
 11. Nurul Amalina binti Alias
 12. Nur Amira binti Maarof

13. Amirah binti Mohaini
 14. Nor Afifa binti Halim
 15. Hor Kam Mun
 16. Nur Siddiqin Abd. Rahim
 17. Nurul Afniza Abdul Aziz
 18. Lawanya a/p K. Ramu
 19. Siti Safinaz Abdullah
 20. Nornasuha Abdullah
 21. Muhammad Shazani Mod Saini
 22. Vikneswary a/p Rajendran
 23. Nurfarahin binti Mohd Shukor
 24. Sri Mathan a/l Rajah Muniandy
 25. Pravin Raj Kanasamy
 26. Goay Yan Zhen
 27. Yvonne Kong
 28. Mansoor Farhan
 29. Stephen Chung Hon Kit
 30. Loy Mei Shiuan
 31. Alexander Ting Chiong Sing
 32. NURUL IZZATI BINTI ABDUL AZIZ
 33. AINURRAIEFAH BINTI ABD AZIZ
 34. NUR HAKIMAH BINTI AHMAD KAMAL
 35. Anim Suhaila Bt Abdul Razak
 36. Kuan Yeh Xi
- PD Project
 1. Production of 50,000 MT/annum isobutylene (2008).
 2. Production of 10 tonne per annum of vitamin B12 by *Pseudomonas denitrificans* from sugar cane molasses (2013).
 3. Production of 20,000 tonne per annum of polyhydroxybutyrate from oil palm frond (2014).
 4. Production of 2,500 tonne per annum of biobutanol from oil palm trunk sap (2015).
 5. Production of 100 metric tonnes of acetic acid per annum by two step fermentation by *Saccharomyces cerevisiae* and *Acetobacter aceti*. (2016)
 6. Production of 1,000 metric tonnes per year of b-cyclodextrin from tapioca starch via enzymatic reaction using *CGTase* (2017)
 7. Production of 4,000 metric tonnes per annum of maltodextrin via enzymatic hydrolysis reaction of cassava starch using alpha-amylase enzyme (2018)

8. Production of 20,000 metric tonnes of bioethanol from oil palm frond *via* acid hydrolysis and fermentation with ethanol red yeast (2019)
9. Designing high strength wastewater treatment plant for DRB HICOM (2020)
10. Production of 20,000 MTA of Isopropyl alcohol (IPA) Using Biomass

POSTGRADUATE SUPERVISION

- **PhD**

No.	Name	Supervision	Year	Status
1	Norhazimah binti Abdul Halim	Co	2012-2016	Graduated
2	Mani Malam Ahmad	Co	2016-2019	Graduated
3	Vikneswary A/P Rajendran (Converted from MSc)	Co	2018-2022	Graduated
4	Murtaza Hayder Syed	Co	2021-2025	Graduated

- **MSc**

No.	Name	Supervision	Year	Status
1	Siti Hajar Binti Mat Zani	Main	2013-2018	Graduated
2	Nur Syazana Binti Muhamad Nasrah	Main	2014-2019	Graduated
3	Faatihah Binti Mohamad Asri	Main	2015-2020	Graduated
4	Nang Nor Azimah Binti Long Nadzri	Main	2016-2018	Graduated
5	Imla Syafiqah Binti Mohd. Salleh	Main	2017-2018	Graduated
6	Fatin Syazwana Binti Hashim	CO	2014-2017	Graduated
7	Anisah Sajidah Binti Haji Saud	CO	2013-2017	Graduated
8	Nur Falia Shazana Manja Binti Farid (UPM Student)	CO	2013-2015	Graduated

PROFESSIONAL WORKS

INTERNAL EXAMINER

PhD by Research Thesis

- MD AHASANUL KARIM; Title: **MICROBIAL LIPID ACCUMULATION THROUGH BIOREMEDIATION OF PALM OIL MILL EFFLUENT BY CO-CULTURING YEAST AND BACTERIA - 2020**
- NOR HAZWANI BINTI AZIZ; Title: **DEVELOPMENT OF FLOODED SOIL RECOVERY VIA SYMBIOTIC SOIL FUNGI - 2020**
- ALIYAH BINTI JAMALUDIN; Title: **DIRECT ENERGY CONVERSION FROM SAGO (METROXYLON SAGU) IN ENZYMATIC BIOFUEL CELL - 2023**
- WAN NADJA JULIKA BINTI WAN HAMIZAN; Title: **THE DEVELOPMENT PROTOTYPE SENSOR FOR DETECTION OF SUGAR ADULTERATION IN MALAYSIAN STINGLESS BEE HONEY - 2023**

Master by Research Thesis

- Abeed Fatima binti Mohidin Batcha; Title: **Biosynthesis of poly(3-hydroxybutyrate) by *Cupriavidus necator* H16 from jatropha oil as carbon source** (Master by Research Thesis) – 2014
- Nor Shahirah binti Mohd Nasir; Title: **Influence of nutrients addition and optimization of parameters on bioethanol production using oil palm trunk sap** (Master by Research Thesis) – 2014
- Sweeta Akbari; Title: **Characterization, stabilization and microwave demulsification of crude oil emulsions** (Master by Research Thesis) – 2016
- AHMAD BAZLI BIN BUSTARY; Title: **BENZENE, TOLUENE, AND XYLENE (BTX) REMOVAL USING *Pseudomonas putida* ATCC49128 IN INDUSTRIAL EFFLUENT TREATMENT SYSTEM IN PETROCHEMICAL INDUSTRY** (Master by Research Thesis) - 2017
- NURI 'ADILAH NASHRULMILLAH BINTI IDRIS; Title: **OPTIMIZATION OF GALLIC ACID YIELD FROM *LABISA PUMILA* IN 25-L MOBILE PILOT SCALE EXTRACTOR *via* ULTRASOUND-ASSISTED EXTRACTION** (Master by Research Thesis) - 2018

Master by Coursework Dissertation

- Tengku Khamanur Azma binti Tengku Mohd Zamri; Title: **MML natural preservatives** (Master by Coursework Dissertation) – 2013
- Noor Atikah binti Mohd Badruddin; Title: **Zeolites catalyst for petrochemical industries from oil palm ash** (Master by Coursework Dissertation) – 2013
- Siti Aisyah Radhiah binti Mohamed @ Ayub; Title: **Production of beta-keratin from chicken feathers** (Master by Coursework Dissertation) – 2013
- Nur Farahain binti Khusnun; Title: **Jatropha oil based bio-adhesive for plywood application** (Master by Coursework Dissertation) – 2013
- Bahrin bin Mohd Shakir; Title: **Production of modified cassava flour (MOCAF)** (Master by Coursework Dissertation) – 2013
- Ibrahim Bello Garko; Title: **Development of new green demulsifier composition for oil production** (Master by Coursework Dissertation) – 2013
- Muhammad Suhaimi bin Man; Title: **Production of bio-oil from empty fruit bunch (EFB) via pyrolysis process** (Master by Coursework Dissertation) – 2013
- Fadzilah binti Abdul Latif; Title: **Business plan for mosquito repellent from lemongrass oil** (Master by Coursework Dissertation) – 2014
- Mohd Hafiz bin Ismail; Title: **Business plan for biogas plant from cow dung** (Master by Coursework Dissertation) – 2014
- Farah Fatimah binti Mohd Azhari; Title: **Business plan for powdered activated carbon from empty fruit bunches** (Master by Coursework Dissertation) – 2014
- Nurhaziqah Azreen Azwa binti Badrul Hisham; Title: **Business plan for sodium silicates from rice husk** (Master by Coursework Dissertation) – 2014
- Nurul Afqah binti Abdul Rahim; Title: **Business plan for biodiesel from microalgae** (Master by Coursework Dissertation) – 2014
- Wan Najibah binti Mohamad; Title: **Business plan for cation exchanger mixed matrix membrane chromatography** (Master by Coursework Dissertation) – 2014
- Norhasima binti Mokhtar; Title: **Business plan for natural insect repellent from curry leave** (Master by Coursework Dissertation) – 2014
- Muhammad Abdul Mu'min bin Nik Mohd Adnan; Title: **Business plan for petroleum coke from oil refinery** (Master by Coursework Dissertation) – 2014
- Nik Muhammad Faisal bin Nik Mohd Adnan; Title: **Business plan for production of doughnut from modified cassava flour** (Master by Coursework Dissertation) – 2014
- Fahim Fayaz; Title: **Business plan for biodiesel from castor oil by using novel catalyst** (Master by Coursework Dissertation) – 2014

EXTERNAL EXAMINER

- Mohammed Nabil bin Mohamad; Title: **Removal of methylene blue by Zn(II) impregnated activated carbon from pineapple waste biomass** (Master by Research Thesis) – 2014 (UTM)
- NURUL ATIQA BINTI OSMAN; Title: **BIOSUGARS PRODUCTION FROM NAPIER GRASS USED IN THE PHYTOREMEDIATION OF PALM OIL MILL EFFLUENT FINAL DISCHARGE** (Master by Research Thesis) - 2020 (UPM)
- AMIRAH SHAFILLA BINTI MOHAMAD KASIM; Title: **SIZE SEPARATION OF SILVER NANOPARTICLES USING DENSITY GRADIENT CENTRIFUGATION AND AGAROSE GEL ELECTROPHORESIS** (Master by Research Thesis) - 2021 (UPM)
- Muhamad Ariff bin Amir Hamzah; Title: **Impact of Rice Husk Biochar on the Anaerobic Co-digestion of Food Waste and Empty Fruit Bunches (EFB) for Biogas Production** (Master by Research Thesis) - 2021 (UiTM)
- KAVITHRAASSHRE A/P ARUMUGAM; **MICROALGAE STRAINS SELECTION AND OPTIMIZATION OF MEDIUM CONSTITUENTS FOR THE ENHANCEMENT OF CALCIUM CARBONATE (CaCO₃) BIOMINERAL PRECIPITATION BY CHLORELLA VULGARIS AND SYNECHOCYSTIS SP. ATCC 27178** (Master by Research Thesis) - 2021 (UPM)
- Norhafiza Binti Nordin; **A CASCADE PRE-TREATMENT OF LOW-PRESSURE STEAM HEATING AND ORGANIC ACID ON PINEAPPLE WASTES FOR FERMENTABLE SUGARS PRODUCTION** (Master by Research Thesis) - 2021 (UTM)
- NURHANI FATIHAH BINTI JARIAH; **BIODIESEL PRODUCTION FROM GREASE TRAP WASTE AND ITS PURIFICATION USING BIO-ADSORBENTS DERIVED FROM BIOMASS** (Master by Research Thesis) - 2021 (UPM)
- Muhammad Qamaran Bin Abdul Aziz; **Design and Performance Testing of Enclosed GWVT Turbine for Micro Hydropower Generation** (Master by Research Thesis) - 2021 (UiTM)
- MUHAMMAD SYAWALUDDIN HILMI BIN YAHYA; **OPTIMIZATION OF PHYCOCYANIN PRODUCTION FROM MICROALGAARTHROSPIRA (SPIRULINA) MAXIMA** (Master by Research Thesis) - 2024 (UPM)
- Jasmin binti Jaraee; **Nipa Sap Natural Fermentation: Strategies to Enhance Its Sugar Content and Bioethanol Derivation** (PhD by Research Thesis) - 2024 (UNIMAS)

- Azrine anak Ajien; **Steam-Activated Carbon from Coconut-Based Self-Sustained Carbonization Biochar for Gas Emission Treatment** (Master by Research Thesis) - 2025 (UiTM)

INTERNAL REVIEWER

- Reviewer for conference paper of ICCEIB 2013 (International Conference of Chemical Engineering and Industrial Biotechnology, Kuantan 28-29 August 2013);
Title: **Bioethanol production from sago pith residue (SPR) using microwave enhanced hydrothermal hydrolysis: A focus on energy efficiency**
- Reviewer for conference paper of ICCEIB 2013 (International Conference of Chemical Engineering and Industrial Biotechnology, Kuantan 28-29 August 2013)
Title: **Kinetics and adsorption equilibrium of cadmium, silver and copper onto rubber seeds shell waste**
- Reviewer for journal paper of ARPN Journal of Engineering and Applied Sciences as special issue in conjunction with The International Conference on Fluids and Chemical Engineering (FluidsChE 2015)
Title: **A Generic Thermodynamic Equilibrium Model-Based Framework for Biomass Gasification Processes**
- Reviewer for journal paper of Journal of Pure and Applied Microbiology as special issue in conjunction with The International Conference on Fluids and Chemical Engineering (FluidsChE 2015)
Title: **Fermentation of oil palm trunk sap to bioethanol by various yeast strains**
- Reviewer for journal paper of Jurnal Teknologi (Mar. 2016)
Title: **A factorial analysis study on factors contribution to ferulic acid production from oil palm frond waste**
- Reviewer for conference paper of ICCEIB 2016 (International Conference of Chemical Engineering and Industrial Biotechnology, Melaka 28-30 October 2016)
Title: **A comparison using free and immobilized laccase for the depolymerization of lignin**
- Reviewer for conference paper of ICCEIB 2016 (International Conference of Chemical Engineering and Industrial Biotechnology, Melaka 28-30 October 2016)
Title: **The environmental pollution perspectives of direct discharge of palm oil mill effluent (POME) wastewater**
- Reviewer for conference paper of The International Conference on Fluids and Chemical Engineering (FluidsChE 2017)
Title: **Policosanol extraction from beeswax and improvement of the purity**
- Reviewer for conference paper of The International Conference on Fluids and Chemical Engineering (FluidsChE 2017)

Title: Microstructural Characterization of Cement Based Product Incorporating Nano Reactive Silica Based Materials

EXTERNAL REVIEWER

- Reviewer for journal paper of Desalination and Water Treatment (Jan. 2015)
Title: **Characteristics of oil palm-shell bio-char and activated carbon prepared at different carbonization times**
- Reviewer for journal paper of Jurnal Teknologi (Apr. 2015)
Title: **Ultrasonicated *Jatropha curcas* seed residue as potential biofuel feedstock**
- Reviewer for journal paper of Jurnal Teknologi (Apr. 2015)
Title: **Organic material in acid mine drainage treatment**
- Reviewer for journal paper of Desalination and Water Treatment (Feb. 2016)
Title: **Comparative study of acid blue 113 wastewater degradation and mineralization by UV/persulfate and UV/Oxone processes**
- Reviewer for journal paper of Jurnal Teknologi (Mar. 2016)
Title: **A factorial analysis study on factors contribution to ferulic acid production from oil palm frond waste**
- Reviewer for journal paper of International Food Research Journal (Nov. 2016)
Title: **Optimization of food waste utilization in the RDF recovery energy facility**

EXTERNAL ASSESSOR

- Diploma in Chemical Engineering Technology (Bioprocess), Universiti Kuala Lumpur, Malaysian Institute of Chemical and Bioengineering Technology (UniKL MICET) **(1st July 2018- 30th June 2023)**
- Diploma in Chemical Engineering Technology (DAK), Universiti Tun Hussein Onn Malaysia(UTHM) **(21st April 2019 - 20th April 2021)**
- ETAC Panel for UNIKL (MICET) **(Januari 2024)**

RESEARCH

RESEARCH GRANT

Current Project

1. NANOFIBERS FABRICATION OF POLY LACTIC ACID AND GELATIN WITH NANO CELLULOSE AS CARRIER FOR SUSTAINED DRUG DELIVERY SYSTEM. **Distinguished Research Grant (UMPSA Internal Grant). Project Leader (RDU243002)** (RM39,900). May 2024 – May 2026 (On-Going)

Past & Completed

1. Interaction Mechanism of Nanocellulose with Poly lactic acid and Chitosan for the Preparation of Nanofiber by Wire Electrospinning for Controlled Release Drug Delivery. MOHE Grant (FRGS). **Project Leader. FRGS/1/2019/TK05/UMP/02/13 (RDU1901176)**.(RM107700). Sept. 2019 - Nov. 2023.
2. THE BEHAVIOR OF BORON SELECTIVE RESIN ON THE ACTIVE LAYER AND BOTTOM STRUCTURE OF ADSORPTIVE MEMBRANE TOWARDS BORON ADSORPTION. **MOHE Grant (FRGS). Member. FRGS/1/2021/TK0/UMP/02/49 (RDU210148)**.(RM124500). Sept. 2021 - Sept. 2023.
3. ELUCIDATION OF INHIBITION MECHANISM OF SELF-HEALING POLYMERIC COATINGS UPON MICROBIAL INDUCED CORROSION(MIC) ON CARBON STEEL SURFACE. MOHE Grant (FRGS). Member. **FRGS/1/2021/TK0/UMP/02/75(RDU210141)**.(RM82,000). Sept. 2021 - Sept. 2023.
4. ELUCIDATING THE MOLECULAR INTERACTION OF IONIC LIQUIDS ON BACTERIAL GROWTH AND ENZYME ACTIVITY IN MIXED CULTURE FERMENTATION. **Matching Grant. Member. RDU200733**.(RM20,000). Sept. 2021 - Sept. 2023.
5. SYNERGIST LIQUID MEMBRANE FORMULATION FOR PLATINUM FROM SEMICONDUCTOR WASTEWATER IN SUPPORTED LIQUID MEMBRANE. **Matching Grant. Member. RDU 192319**.(RM20,000). Dec. 2020 - Dec. 2022.
6. Development and Characterisation of Nanofiltration Hollow Fiber Membrane for Acetic Acid Removal from Oil Palm Biomass Hydrolysate. **MOHE Grant (FRGS). Member. RDU140144**. (RM120,800). July 2014 – June 2017

7. Bio-Refinery: Pilot Scale of Sugar Separation from Hydrolysis Products of Lignocellulose Biomass using Spiral-Wound Nanofiltration Membrane. **MOHE Grant (LRGS). Member. RDU140901.** (RM100,000). July 2014 – June 2017.
8. Optimization, Scale-Up and Characterization of Sesquiterpene from Oil Palm Frond Juice. **UMP Grant. Project Leader. RDU150315.** (RM35,000). Apr 2015 – Mar 2017.
9. Utilization of oil palm frond (OPF) juice for the production of bioethanol. **UMP Grant. Project Leader. GRS140368.** (RM3,500). Jul 2014 – Jun 2016.
10. Fundamental Study on the Reaction Mechanisms and Kinetics of Biobutanol Production from Oil Palm Frond Juice in a Stirred Tank Bioreactor. MOHE Grant (FRGS). **Project Leader. RDU140139.** (RM119,000). July 2014 – June 2017
11. Production of Ferulic Acid from Fiber Presses Oil Palm Frond (FPOPF) Biotransformation using Ferulyl Esterases from Co-Culture Inoculum. MOHE Grant (RAGS). **Member. RDU131412.** (RM47,942). Sept 2013 – Sept 2015.
12. Development of Flooded Soil Recovery *via* Arbuscular Mycorrhizal Fungi (AMF) Symbiotic. MOHE Grant (FRGS). **Member. RDU140121.** (RM97,000). July 2014 – June 2016
13. Oil Palm Sap as a New Feedstock For the Catalytic Synthesis of Organic Carbonate. MOHE Grant (FRGS). **Member. RDU140135.** (RM98,350). July 2014 – June 2016
14. Feruloyl-Polysaccharide Hydrolysis of Fiber Pressed Oil Palm Frond (FPOPF) using Eco-Culture. UMP Grant. **Member. RDU140338.** RM29,100. Apr. 2014 – Mar. 2016.
15. Separation of Xylose from the Hydrolysis of Fiber Pressed Oil Palm Front (FPOPF) using Composite Nanofiltration Spiral Wound Membrane. UMP Grant. **Member. RDU140336.** RM29,000. Apr. 2014 – Mar. 2016
16. Efficacy of Natural Bioicide in Mitigate Sulfate Reducing Bacteria (SRB) in Oil and Gas Pipeline. MOHE Grant (RAGS). **Member. RDU131414.** (RM64,542). Sept 2013 – Sept 2015.
17. Enhanced biosugars recovery from oil palm frond juice for the production of value-added products. MOHE Grant (RAGS). **Project Leader. RDU121406.** (RM50,000). Dis 2012 – Dis 2014.
18. A Test Kit for Heavy Metal Identification in Wastewater using Task-Specific Ionic Liquids (TSILs). UMP Grant. **Member. RDU140347.** (RM23,500). Apr. 2014 – Apr. 2016.
19. Synthesis and Characterization of Modified SBA-15 for hydrocarbon Conversion. UMP Grant. **Member. RDU140398.** (RM31,000). Sept. 2014 – Sept. 2016.
20. Utilization of Nipa (Nypa Furticans) Palm Frond as a Potential for Bio-Ethanol. UMP Grant. **Member. RDU140340.** (RM30,550). Apr. 2014 – Mar. 2016.

21. Waste Water Treatment with *Moringa Oleifera* Seeds Cake Residue. UMP Grant. **Member. RDU140318.** (RM22,700). Apr. 2014 – Mar. 2016
22. Process Optimization In Production Of Monoclonal Antibody Against 17-CAH. UMP Grant. **Member. RDU050106**
23. Developing Safety Aptitude Standard & Measuring Tools for Contractor Worker During Turn Around Operation In Petrochemical. UMP Grant. **Member. RDU050122**
24. Development of Novel Catalyst For Biodiesel Production From Waste Cooking Oil UMP Grant. **Member. RDU070374**
25. Production of Polyhydroxylalkanoates (PHA) from Oil Palm Biomass. UMP Grant. **Member. RDU100332**
26. Development of Antifouling Polyester Membrane for Surface Water Treatment (Under Separation Process Research Cluster). UMP Grant. **Member. RDU110325** (RM40, 000). Jul 2011 – November 2013.

LIST OF PUBLICATIONS

CHAPTER IN BOOK

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21. **Mior Ahmad Khushairi Mohd Zahari**, Jailani Salihon, and Mohd Ali Hassan (2009). The Potential of Oil Palm Biomass for the Production of Poly (3-hydroxybutyrate) (PHB). Seminar on Biomass for Biofuel and Value-Added Products 2009 (SBBVAP09) (Proceeding)
22. **Mior Ahmad Khushairi Mohd Zahari**, Nor Aini Abdul Rahman, Jailani Salihon, Wan Asma Ibrahim and Mohd Ali Hassan (2009). A Feasibility Study on the Production of Poly(3-hydroxybutyrate) (PHB) from Oil Palm Biomass. International Conference on Bio-based Polymer, USM Penang, 2009. (Proceeding)
23. **Mior Ahmad Khushairi Mohd Zahari**, Jefri Jaapar, Mohd Azri Bunyok, Shahrul Halim Sohor and Wan Azlina Ahmad (2003). Biooxidation of Mine Tailings Using A Mixed Bacterial Population. Biohydrometallurgy: A Sustainable Technology in Evolution Proceedings of the 15th International Biohydrometallurgy Symposium September 14-19, Athens, Greece ISBN 960-88415-1-8, pp. 513-523
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ORAL LECTURES

1. 1st Process Systems Engineering & Safety Symposium (ProSES). Vistana Hotel, Kuantan, Pahang. 4th September 2019.
2. International Conference on Recent Advancements in Science and Technology (ICoRAST 2017), 7th – 8th of November 2017, Melaka, Malaysia.
3. The 2nd International Conference on Separation Technology (ICOST 2017). 15th – 16th of April 2017, Pulai Spring Resorts, Johor Bharu, Johor.
4. International Conference on Fluids and Chemical Engineering (FluidsChE 2017), 4 – 6 Apr. 2017, Kota Kinabalu, Sabah, Malaysia.
5. International Conference of Chemical Engineering and Industrial Biotechnology, Melaka 28-30 October 2016 (ICCEIB2016).
6. International Conference on Fluids and Chemical Engineering (FluidsChE 2015), 25 – 27 Nov. 2015, Langkawi, Kedah, Malaysia.
7. Asian Congress on Biotechnology 2015 (ACB2015). 15 – 19 Nov. 2015, Kuala Lumpur, Malaysia.
8. Conference on Nanotechnology and Bioresource Technology (NBT2015). 28 – 29th March 2015, Universiti Kebangsaan Malaysia, Bangi, Malaysia.
9. National Postgraduate Conference (NCON-PGR 2015). 24 – 25 January 2015, Universiti Malaysia Pahang, Kuantan, Malaysia.
10. 13th International Symposium on Bioplastics, Biocomposites and Biorefining (ISBBB-2014). May 19–24, 2014. Guelph, Ontario, Canada.
11. Conference on Industry-Academia Joint Initiatives in Biotechnology (CIA: Biotech13). 5 – 7 December 2013. Cameron Highlands, Pahang, Malaysia.
12. 6th International Congress of Chemistry and Environment (ICCE-2013). 8 – 10 July 2013. Antwerp, Belgium.
13. International Biotechnology Symposium (IBS) 2012. 16-21 September 2012. EXCO, Daegu, South Korea.
14. 4th Asian Science & Technology Congress 2002. 25-27 April 2002. Nikko Hotel, Kuala Lumpur, Malaysia.

POSTER PRESENTATIONS

1. AFOB Regional Symposium 2014 (ARS2014) February 9–11, 2014, Kuala Lumpur, Malaysia
2. Seminar on Biomass for Biofuels and Value-added Products (SBBVAP) 2009. 27 – 28th October 2009, Kuala Lumpur, Malaysia.

3. International Conference on Biobased Polymer (ICBP) 2009. 11 – 13th November 2009, USM, Penang, Malaysia.
4. International Biohydrometallurgy Symposium (IBS) 2003. 14 – 19th Sept. 2003, Athens, Greece.

DECLARATION

I hereby declare that the information that I have given in this Curriculum Vitae is true and correct.

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DATE: 06th January 2026