CURRICULUM VITAE – DR. HAFIZUDDIN WAN YUSSOF

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AREA OF EXPERTISE AND PROFESSIONAL INTEREST

Chemical Engineering, Industrial Biotechnology, Bioprocess Engineering, Biorefinery, Fermentation Technology, and Process Intensification.

ACADEMIC QUALIFICATIONS

PhD in Chemical Engineering
Newcastle University, UK (July 2007 – March 2012)
Thesis: Evaluation of Heterogeneous Quaternary Ammonium Catalysts for Transesterification of Triglycerides.

MEng in Bioprocess Engineering
Universiti Teknologi Malaysia, Malaysia. (2002 – 2004)
Thesis: The Behaviour of the Adsorption Process Using Polymeric Resin Amberlite XAD-7 as an Adsorbent in Stevioside Recovery

BEng. in Chemical Engineering (Bioprocess)
Universiti Teknologi Malaysia, Malaysia. (1995 – 2000)
Thesis: Reaction Mechanism and Reactor Design: Comparative Study on the Biotransformation Using Pectinase

PROFESSIONAL BODY

Board of Engineers, Malaysia: 36320R (Member since 2001)
MBOT, Malaysia: GT18020411 (Member since 2018)
Energy Institute, UK: 0064373 (Member since 2015)

WORKING EXPERIENCE

Feb 2001 – Feb 2004	Chemical Engineering Pilot Plant, Universiti Teknologi Malaysia
Feb 2004 – Feb 2005	Production Engineer at Stevian Biotechnology Sdn. Bhd., Nilai, Negeri Sembilan.
Feb 2005 – Feb 2007	Lecturer at Kolej Universiti Kejuruteraan & Teknologi Malaysia
Feb 2007 – March 2012	Lecturer at Universiti Malaysia Pahang
July 2007 – Nov 2010	Laboratory Demonstrator at Newcastle University, UK
March 2012 – March 2017	Senior Lecturer at Universiti Malaysia Pahang
March 2017 – Present	Associate Professor at Universiti Malaysia Pahang

MANAGEMENT POSITION

Jan 2020 – Present	Head of Bioprocess & Biosystem Cluster (BBEC)
Jan 2018 – Dec 2019	Deputy Dean (Academic & Student Affairs)- FKKSA, UMP
Sept 2013 – Dec 2017	Head of Programme (Master by Coursework) - FKKSA, UMP
March 2012 – March 2013	Head of Academic Panel (Biotechnology) - FKKSA, UMP
July 2006 – Feb 2007	Head of Programme (Biotechnology) - FKKSA, UMP
Feb 2013 – Feb 2015	Coordinator for Undergraduate Students Plant Design – FKKSA, UMP
Jan 2014 – Dec 2016	Coordinator for Promotion - FKKSA, UMP
Sept 2014 – Dec 2015	Research Fellow in Centre for Earth Resources & Management (CERRM), UMP
May 2013 – April 2015	Internal Auditor, UMP Academic Organization (PAKAD)

STUDENT SUPERVISION

MAIN SUPERVISOR (BY RESEARCH)

1. **Nurul Aliaa Bt. Abdul Rahman (PhD – PKC19008)** – Elucidation of Ferulic Acid Recovery Mechanism from Mixed Culture Fermentation Using Task Specific Ionic Liquids. **On going** – Second Year.

2. **Nurul Aishah Bt. Mazlan (PhD – PKC16018)** – Production of Xylooligosaccharides from Oil Palm Biomass. **Graduated**.

3. **Zulsyazwan Ahmad B. Khushairi (PhD – PKB14001)** – Production of Ferulic Acid from Fiber Pressed Oil Palm Frond (FPOPF) Using Co-culture. **Graduated.**

4. **Syamsutajri Bt. Syamsol Bahri (MSc – MKC12010) –** Development and Evaluation of Mesoscale Oscillatory Baffled Reactor in Transesterification of Refined Palm Oil Using Heterogeneous. **Graduated.**

5. **Mah Kah Hong (MSc - MKB14003)** – Optimization of Interfacial Polymerization Thin Film Composite Membrane For Separation of Xylose from Glucose. **Graduated.**

6. **Fatin Syazwana Bt. Hashim (MSc – MKC15006)** – Optimization of Xylose and Glucose from Fiber Pressed Oil Palm Frond (FPOPF) Using Enzymatic Hydrolysis. **Graduated**.

7. **Nurul Fatihah Bt. Mahamad Roli (MSc – MKC14027)** – Design of Pilot scale Nanofiltration System for Separation of Xylose from Glucose. **Graduated.**

8. **Imla Syafiqah Bt. Mohd Salleh (MSc – MKC16019)** – Removal of Mercury Ions From Aqueous Solution Using Palm Oil Fuel Ash. **Graduated.**

CO-SUPERVISOR (BY RESEARCH)

1. **Nurul Shareena Aqmar Bt. Mohd Sharif (PhD)** – Production of Ferulic Acid via Feruloyl Polysaccharide Hydrolysis of Banana Stem Waste Using Soil Mixed Culture. **Graduated.**

2. **Elfira Bt. Anuar (MSc**) – Glucose-Xylose Separation in Biomass Processing Using Nanofiltration Hollow Fiber Membrane. **On going**.

3. **Norfaezahtul Bt. Nor Azaini (MSc)** – Mass Transfer Study in Oscillatory Flow Reactor. **On going**.

MAIN SUPERVISOR (BY COURSEWORK)

1. **Thirmurgan Naikker A/L Perumal** (KKE15013) – Factorial Study on the Enzymatic Hydrolysis of Pretreated Fiber Pressed Oil Palm Frond Using Cellic CTECH2, Sacchariseb C and Sacchariseb BG – 2016.

2. **Thiwakar A/L Karunamurthy** (KKE15014) – Factorial Study on the Enzymatic Hydrolysis of Pretreated Fiber Pressed Oil Palm Frond Using Cellic CTECH2, Celluclast and Novozyme 188 – 2016.

3. **Tengku Zuniza Bt. Tengku Yahya Shah** (KKK15007) – Pilot Scale Wound Nanofiltration Membrane for Separation of Oil Palm Frond Hydrolysate – 2016.

4. **Ahmad Afifi B. Ibrahim** (KKK14014) – Business Plan for Aiwan Stevia Flavoured Drinking Water Production - 2015.

5. **Mohd Nor Khairy B. Khasimi @ Mohamed** (KKK15003) – Business Plan for Soft Pretzel Bread Using Modified Cassava Flour (MOCAF) – 2015.

6. **Norseri Bt. Mohd Mustaffa** (KKK1502) - Business Plan for Portable Infant Warmer with Incubator – 2015.

7. **Shazli Syahmi B. Mohamad Shafiee** (KKK15004) – Business Plan for Non-Alcohol Based Hand Sanitizer – 2015.

8. **Yuniza Bt. Mohamed** (KKK14017) – Business Plan for Production of Natural Shower Gel – 2015.

9. **Mohd Hafiz B. Ismail** (KKK13003) – Business Plan for Biogas Plant from Cow Dung – 2014.

10. **Muhammad Abdul Mu'min B. Mohd Azemi Azman** (KKK14003) – Business Plan for Petroleum Coke from Oil Refinery – 2014.

11. **Nik Muhammad Faisal B. Nik Mohd Adnan** (KKK14004) – Business Plan for Production of Doughnut from Modified Cassava Flour – 2014.

12. **Nurhaziqah Azreen Azwa Bt. Badrul Hisham** (KKK13005) – Business Plan for Sodium Silicate from Rice Husk – 2014.

CO-SUPERVISOR

1. **Saad Mohsin Abed** (KKK14005) – Production of Syngas from CO_2 Reforming of CH_4 over Ni-Ce/SBA-15 – 2016.

RESEARCH GRANT

EXTERNAL GRANT (PRINCIPLE RESEARCHER)

1. Elucidation the Ferulic Acid and Recovery Mechanism from Mixed Culture Fermentation Broth Using TaskSpecific Ionic Liquids (TSILs). RDU190171 – **FRGS-KPT Grant**. Approved amount **RM 99 000**. 1 January 2019 to 31 December 2020.

2. Biochemical Platform for Conversion of Diversified Lignocellulosic Biomass to Priceless Precursor and Bio-based Fine Chemicals. RDU160901 – **LRGS-UKM-KPT Grant**. Approved amount **RM 100 000**. 15 May 2016 to 14 May 2018.

3. Production of Renewable Biosugars From Fiber Pressed Oil Palm Frond (FPOPF) By Enzyme Blending Through Enzymatic Hydrolysis. RDU151304 – **RACE-KPT Grant**. Approved amount **RM 50 000**. 1 Feb 2015 to 31 Jan 2017.

4. Production of Ferulic Acid from Fiber Pressed Oil Palm frond (FPOPF) Biotransformation Using Ferulyl Esterase from Co-Culture Inoculum. RDU131412 – **RAGS-KPT Grant**. Approved amount **RM 47 942**. 17 September 1013 to 16 September 2015.

INTERNAL GRANT (PRINCIPLE RESEARCHER)

1. Optimization of Acid Pretreatment of Lignocellulosic Biomass For Production of Xylooligosaccharides. RDU183115 – **UMP Grant**. Approved amount **RM 34 000**. 15 June 2018 to 14 June 2020.

2. Removal of Mercury from Wastewater Using Palm Oil Fuel Ash. RDU17035 – **UMP Grant**. Approved amount **RM 31 000**. 30 April 2017 to 29 April 2019.

3. Design and Fabrication of Low Cost Portable Water Treatment System for Emergency Preparedness and Disaster Relief. RDU140352 - **UMP Grant.** Approved amount **RM 37 250.** 25 April 2014 to 24 April 2016.

4. Analysis of Mixing Behavior in Oscillatory Baffles Reactor (OBR) in the Transesterification of Refined Palm Oil to Produce Biodiesel Using Ca(CH3O)2 as a Heterogeneous Catalyst. RDU 110333. **UMP Grant.** Approved amount **RM 36 000.** 15 July 2011 to 15 July 2013.

5. Separation of Xylose from the Hydrolysis of Fiber Pressed Oil Palm Frond (FPOPF) Using Composite Nanofiltration Spiral Wound Membrane. RDU 140336. **UMP Grant.** Approved amount **RM 29 000.** 1 January 2014 to 31 March 2016.

6. Production of Renewable Biosugars from Fiber Pressed Oil Palm Frond (FPOPF) by Enzyme Blending through Enzymatic Hydrolysis. GRS 1503125. **UMP-PGRS Grant.** Approved amount **RM 2000.** 25 August 2015 – 25 August 2017.

7. Development and Evaluation of Mesoscale Oscillatory Baffled Reactor in Transesterification of Refined Palm Oil. GRS 120385. **UMP-PGRS Grant.** Approved amount **RM 3500.** 1 April 2013 to 31 March 2015.

8. Separation of Xylose from The Hydrolysis of Fiber Pressed Oil Palm Frond (FPOPF) Using Composite Nanofiltration Spiral Wound Membrane. GRS 1403113. **UMP-PGRS Grant. Approved amount RM 2500.** 25 October 2014 to 24 October 2016.

9. Design and Fabrication of Pilot Scale Nanofiltration System for Separation of Xylose from Glucose. GRS 150353. **UMP-PGRS Grant.** Approved amount **RM1500.** 15 March 2015 to 14 March 2017.

10. Production of Ferullic Acid from Fiber Pressed Oil Palm Frond (FPOPF) Using Co-culture. GRS 140372. **UMP-PGRS Grant.** Approved amount **RM 6000.** 15 July 2014 to 31 March 2016.

EXTERNAL GRANT (CO-RESEARCHER)

1. Biorefinery : Pilot Scale of Sugar Separation from Hydrolysis Product of Lignocellulose Biomass Using Spiral Wound nanofiltration Membrane. RDU 140901– **LRGS-UKM Grant**. Approved amount **RM 160 000**. 1 July 2014 – 30 June 2017.

2. Development of Flooded Soil Recovery via Arbuscular Mycorrhizal Fungi (AMF) Symbiotic. RDU 140121 – **FRGS-KPT Grant**. Approved amount **RM 97 000**. 1 July 2014 – 31 December 2016.

3. Development and Characterization of Nanofiltration Hollow Fibre Membrane for Acetic Acid Removal from Oil Palm Biomass Hydrolysated. RDU 140144 – **FRGS-KPT Grant**. Approved amount **RM 120 800**. 1 July 2014 to 30 June 2017.

4. Fundamental on The Reaction Mechanisms and Kinetics of Biobutanol Production from Oil Plam Frond Juice in a Stirred Tank Bioreactor. RDU140139. – **FRGS-KPT Grant**. Approved amount **RM 119 000**. 1 July 2014 to 30 June 2017.

5. Chemically Treated Limestone Based Catalyst for Both the Production of Second Generation Bodiesel and Conversion of Glycerol Biowaste into Valuable Syngas. RDU 121215 – **MTUN-KPT Grant**. Approved amount **RM 87 130**. 1 June 2012 to 30 June 2014.

6. Fabrication of Ion Exchanger Mixed Matrix Membrane (MMM) Chromatography for Heavy Metal Removal. RDU 121309. – **RACE-KPT Grant**. Approved amount **RM 49 800**. 15 November 2012 to 14 May 2015.

INTERNAL GRANT (CO-RESEARCHER)

1. Ferulic Acid Production from Banana Stem Waste Using Mechanical Extraction. DUU 150381. **UMP Grant.** Approved amount **RM 35 700.** 1 October 2015 – 30 September 2017.

2. Local made hollow Fiber Nanofiltration Membrane for Sugar Separation from Hydrolysated of Oil Palm Biomass. RDU 140337. **UMP Grant.** Approved amount **RM 23 500.** 1 April 2014 – 31 March 2016.

3. Inhibitor Removal in Biomass Processing Using Advanced Membrane Material. RDU 150316. **UMP Grant.** Approved amount **RM 28 000.** 1 April 2015 – 31 March 2017.

4. Design and Fabrication of In Situ Liquid-Liquid Extraction for Removal of Toxic Production from Fermentation Broth. RDU 140317. **UMP Grant.** Approved amount **RM35 500.** 1 April 2014 to 31 March 2016**.**

5. Feruloyl-Polysaccharides Hydrolysis of Fiber Pressed Oil Palm Frond (FPOPF) Using Eco-Culture. RDU 140338. **UMP Grant.** Approved amount **RM 29 100.** 1 April 2014 to 31 March 2016.

6. Studies on The Production of Bioethanol from Oil Frond Juice as a Renewable and Sustainable Fermentation Substrate. RDU 10326. **UMP Grant.** Approved amount **RM 33 000.** 1 April 2014 to 31 March 2016.

7. Development of Antifouling Polyester Membrane for Surface Water Treatment (Under Separation Process Research Cluster). RDU 110325. **UMP Grant.** Approved amount **RM 40 000.** 15 July 2011 to 15 July 2013.

PUBLICATIONS

JOURNALS

1. Noor Idayu Nashiruddin, Azmi Fadziyana Mansor, Roshanida A. Rahman, Rosli Md. Ilias, **Hafizuddin Wan Yussof** (2020) Process Parameter Optimization of Pretreated Pineapple Leaves Fiber for Enhancement of Sugar Recovery. **Industrial Crops & Products.** Vol. 152; 112514 .

2. Kamaliah Abdul Samad, Norazwina Zainol, **Hafizuddin Wan Yussof,** Zulsyazwan Ahmad Khushairi, Nurul Shareena Aqmar Mohd Sharif and Nur Syahirah Mohd Syukri (2020) Isolation, Identification and Characterization of Soil Bacteria for the Production of Ferulic Acid Through Co-Culture Fermentation Using Banana Stem Waste. **SN Applied Sciences.** 2:339.

3. Zulsyazwan Ahmad Khushairi, Kamaliah Abdul Samad, Nurul Aliaa Abdul Rahman, **Hafizuddin Wan Yussof**, and Norazwina Zainol (2020). Application of Michaelis–Menten in the Kinetics of Oil Palm Frond Enzymatic Hydrolysis for Ferulic Acid Production. **SN Applied Sciences**. 2:254.

4. Nurul Fakhriah Ismail, Sofiah Hamzah, Nurul Ashraf Razali , **Wan Mohd Hafizuddin Wan Yussof**, Nora'aini Ali and Abdul Wahab Mohammad (2019). Preparation and Characterisation of Hydroxyapatite Extracted From Fish Scale Waste for the Removal of Gallic Acid as Inhibitor in Biofuel Production. **Malaysian Journal of Analytical Sciences**. Vol 23 No 6 (2019): 938 – 949.

5. K. H Mah, **H W Yussof**, M N A Seman, A W Mohammad. (2019) Optimisation of Interfacial Polymerization Factors In Thin-Film Composite (TFC) Polyester Nanofiltration (NF) Membrane For Separation of Xylose From Glucose. **Separation & Purification Technology.** Vol. 209; 211-222.

6. Anis Surayani Mat Yaacob, Nurul Aishah Mazlan, Kamaliah Abdul Samad, , **Hafizuddin Wan Yussof**, Syed Mohd Saufi And Jamaliah Jahim. (2019) Factors Affecting Enzymatic Hydrolysis of Oil Palm Frond Bagasse Using Cellic HTech2 For Xylooligosaccharides Production. **Asian Journal of Agriculture & Biology.** Vol. 7 (1); 122-129.

7. Nurul Aishah Mazlan, Kamaliah Abdul Samad, , **Hafizuddin Wan Yussof**, Syed Mohd Saufi and Jamaliah Jahim. (2019) Xylooligosaccharides From Potential Agriculture Waste: Characterization and Screening on the Enzyme Hydrolysis Factors. **Industrial Crops & Products.** Vol. 129; 575-584.

8. K. H Mah, **H W Yussof**, M N A Seman, A W Mohammad. (2018) Polyester Thin Film Composite Nanofiltration Membranes Via Interfacial Polymerization: Influence of Five Synthesis Parameters on Water Permeability. **Journal of Mechanical Engineering and Science**. Vol. 162; 3387-3398.

9. **H. W. Yussof,** S. S. Bahri, and N. A. Mazlan. (2018) Evaluation of Power Density on the Bioethanol Production Using Mesoscale Oscillatory Baffled Reactor and Stirred Tank Reactor. **IOP Conf. Series: Materials Science and Engineering.** Vol. 334**;** 012070.

10. Imla Syafiqah Mohd Salleh and **Hafizuddin Wan Yussof**. (2018) Adsorption of mercury from aqueous solutions using palm oil fuel ash as an adsorbent - batch studies, **IOP Conf. Series: Materials Science and Engineering.** Vol. 334; 012039.

11. Imla Syafiqah Mohd Salleh, Nor Akmalina Mustazar, and **Hafizuddin Wan Yussof.** (2018) Mercury Removal from Wastewater Using Palm Oil Fuel Ash. **MATEC Web of Conferences**, 150, 02007.

12. **H. W. Yussof**, S. S. Bahri, A. N. Phan, A. P. Harvey. (2017) Effect of Oscillation Amplitude On the Residence Time Distribution For the Mesoscale Oscillatory Baffled Reactor, **Chemical Engineering Research Bulletin**. 19, 111-117.

13. Fatin Syazwana Hashim, **Wan Mohd Hafizuddin Wan Yussof**, Mah Kah Hong, Nurul Fatihah Mohamad Roli, Syed Mohd Saufi Tuan Chik, Mazrul Nizam Abu Seman and Abdul Wahab Mohammad. (2017) Factors Affecting Enzymatic Hydrolysis from Pretreated Fibre Pressed Oil Palm Frond Using Sacchariseb C6. **Journal of Physical Science**, Vol. 28(Supp. 1), 281–295.

14. K. H Mah, **H W Yussof**, M N A Seman, A W Mohammad. (2017) Synthesis and Chracterization of Polyester thin Film Composite membrane via Interfacial Polymerization: Fouling Behaviour of Uncharged Solute. **Journal IOP Conference Series: Materials Science and Engineering**. Vol. 162; 012037.

15. N F M Roli, **H W Yussof**, M N A Seman, S M Saufi, A W Mohammad Separating. (2017) Xylose from Glucose using Spiral Wound Nanofitration Membrane: Effect of Cross-flow parameters on Sugar Rejection. **Journal IOP Conference Series: Materials Science and Engineering**. Vol. 162; 012035.

16. Fatin Syazwana Hashim, **Hafizuddin Wan Yussof**. (2017). Physical, Chemical and Morphological Characterization of the Native and Alkaline Pre-treated Fiber Pressed Oil Palm Frond (FPOPF) for Fermentable Sugars Production. **Chemical Engineering Transactions**. 56,1087-1092.

17. Wan Hairani Wan Na'Aman, Syed M. Saufi Tuan Chik, Mazrul Nizam Abu Seman, **Hafizuddin Wan Yussof**, Abdul Wahab Mohammad. (2017). Fabrication of Asymmetric Nanofiltration Flatsheet Membrane for the Separation of Acetic Acid from Glucose. **Chemical Engineering Transactions**. 56,1201-1206.

18. Siti Normunira Ramli, Syed M. Saufi, Mazrul Nizam Abu Seman, **Hafizuddin Wan Yussof**, Abdul Wahab Mohammad. (2017). Effects of Polyethersulfone Membrane Substrate on the Separation Performance of Thin Film Composite Membrane in Biorefinery. **Chemical Engineering Transactions**. 56,1033-1038.

19. Imla Syafiqah, Abdul Aziz Mohd Azoddein, Shivananda Chandraseagar, Faizal Wan Ishak. **Hafizuddin Wan Yussof**. (2017). A Factorial Analysis Study on Removal of Mercury by Palm Oil Fuel Ash Adsorbent. **Chemical Engineering Transactions**. 56,1501-1506.

20. Nurul Fatihah Mohd Roli, **Hafizuddin Wan Yussof**, Syed Mohd Saufi Tuan Chik, Mazrul Nizam Abu Seman, Abdul Wahab Mohammad. (2017). Synthesis of Nanofiltration Membrane Developed from Triethanolamine and Trimesoyl Chloride for Separation of Xylose from Glucose. **Chemical Engineering Transactions**. 56,1507-1512.

21. K. H. Mah, **H. W. Yussof**, M. N. Abu Seman, A. W. Mohammad. (2016). Effect of Curing Time on Pore Size and Effective Thickness/Porosity of Polyester Thin Film Composite Nanofiltration Membranes. **Jurnal Teknologi**. Vol. 78(12): pp. 31-37.

22. N. Fatihah M. Roli, **Hafizuddin Wan Yussof**, Syed Mohd Saufi, M. N. Abu Seman, A. W. Mohammad. (2016). Separation of Xylose from Glucose using Pilot Scale Spiral Wound Commercial Membrane. **Jurnal Teknologi**. Vol. 78(12): pp. 1-5.

23. Zulsyazwan Ahmad Khushairi, **Hafizuddin Wan Yussof**, Nurul Atikah Rodzri, Rozaimi Abu Samah, Norazwina Zainol. (2016). A Factorial Analysis Study on Factors Contribution to Ferulic Production from Oil Palm Frond Waste. **Jurnal Teknologi**. Vol. 78(10): pp. 147-152.

24. Kah Hong Mah, **Hafizuddin Wan Yussof**, Mazrul Nizam Abu Seman, Abdul Wahab Mohammad. (2016). Separation of xylose Using thin-film composite nanofiltration membrane: Screening of interfacial polymerization factors. **RSC Advances**. pp. 69454-69464. (**IF = 3.289**)

25. F S Hashim, **H W Yussof**, M A K M Zahari, R M Illias, R A Rahman. (2016). A Factorial Analysis Study on Enzymatic Hudrolysis of Fiber Pressed Oil palm Frond for Bioethanol Production. **IOP Conferencre Series Earth and Environmental Science**.pp. 1-5. (**Scopus**)

26. K. H. Mah, **H. W. Yussof**, M. N. Abu Seman, A. W. Mohammad. (2016). Thin-Film Composite Nanofiltration Membrane: A study on the curing time and Its Performance Evaluation. **International Journal of Biomass and Renewable (IJBR)**. Vol 5(1): pp. 19-25.

27. Kah H. Mah, **Hafizuddin Wan Yussof**, Mazrul N. Abu Seman, Nurul A. Jalanni, Norazwina Zainol. (2015). Study on factors affecting separation of xylose from glucose by nanofiltration Using composite membrane developed from triethanolamine (TEOA) and trimesoyl chloride (TMC). **Journal of Engineering Science and Technology**. pp. 92 – 100. (**Scopus**)

28. Mardhiana Binti Ismail, Ghazi Faisal Najmuldeen, **Hafizuddin Wan Yussof**, Jolius Gimbun. (2015). Exploring the Transesterification of Castor Oil to Produce Second Generation Biodiesel Using a Novel Catalyst. **International Journal of Engineering Research & Technology**. pp. 289-293.

29. **Hafizuddin Wan Yussof**, Syamsultajri S. Bahari, Adam P. Harvey. (2015). Kinetic Modeling of Transesterification of Triacetin Using Synthesized Ion Exchange Resin (SIERS). International **Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering Vol:9**. pp. 99-103.

30. K. H. Mah, **H. W. Yussof**, N. A. Jalanni, M. N. Abu Seman, N. Zainol. (2014). Separation of Xylose From Glucose Using Thin Film Composite (TFC) Nanofiltration Membrane: Effect of Pressure, Total Sugar Concentration and Xylose/Glucose Ratio. **Jurnal Teknologi**. pp. 93-98. (**Scopus**)

31. A.E. Atabani, T.M.I. Mahlia, H.H. Masjuki, Irfan Anjum Badruddin, **Hafizuddin Wan Yussof**, W.T. Chong, Keat Teong Lee. (2013). A comparative evaluation of physical and chemical properties of biodiesel synthesized from edible and non-edible oils and study on the effect of biodiesel blending. **Energy**. pp. 296-304. (**IF = 4.292**)

32. Elfira Anuar, Syed Mohd Saufi Tuan Chik, Mazrul Nizam Abu Seman, **Hafizuddin Wan Yussof**, Ahmad Fauzi Ismail. (2017). Thin Film Composite Hollow Fiber Membrane for Separation in Biorefinery. **Chemical Engineering Transactions**. 56,1099-1104.

33. Wan Hairani Wan Na'Aman, Syed M. Saufi Tuan Chik, Mazrul Nizam Abu Seman**, Hafizuddin Wan Yussof**, Abdul Wahab Mohammad. (2017). Fabrication of Asymmetric Nanofiltration Flatsheet Membrane for the Separation of Acetic Acid from Glucose. **Chemical Engineering Transactions**. 56,1201-1206.

PROCEEDINGS

1. **H. W. Yussof** and S. S. Bahri. (2017). Characterization of the Fluid Mixing in Mesoscale Oscillatory Baffled Reactor Using Tanks-in-series Model, FluidsChe 2017, Kota Kinabalu, Sabah.

2. **H. W. Yussof** and S. S. Bahri. (2017). Evaluation of Power Density on the Bioethanol Production using Mesoscale Oscillatory Baffled Reactor and Stirred Tank Reactor, ICChESA 2017, Acheh, Indonesia.

3. Imla Syafiqah, **Hafizuddin Wan Yussof**. (2017). Adsorption of Mercury from Aqueous Solutions Using Palm Oil Fuel Ash as an Adsorbent - Batch Studies. ICChESA 2017. Aceh, Indonesia.

4. Imla Syafiqah, **Hafizuddin Wan Yussof**. (2017). The Use of Factorial Design for Analysis of Mercury Removal Efficiency using Palm Oil Fuel Ash, cleanWAS, Bangkok 2017, Thailand.

5. Imla Syafiqah, **Hafizuddin Wan Yussof**. (2017). Kinetics, Isotherms, and Thermodynamic Studies on the Adsorption of Mercury (Ii) Ion From Aqueous Solution Using Modified Palm Oil Fuel Ash, The 3rd International Conference on Green Chemical Engineering and Technology Swiss-Garden Hotel Melaka.

6. Imla Syafiqah, **Hafizuddin Wan Yussof**. (2017). Mercury Removal from Wastewater Using Palm Oil Fuel Ash. Malaysian Technical Universities Conference on Engineering and Technology (MUCET) 2017, 6 - 7 December 2017. Pulau Pinang.

7. F. S. Hashim, **H. W. Yussof**, M. A. K. M. Zahari, R. A. Rahman, R. M. Illias (2016). Physical, Chemical and Morphological Characterization of the Native and Alkaline Pre-treated Fiber Pressed Oil Palm Frond (FPOPF) for Fermentable Sugars Production. 9th Regional Conference on Chemical Engineering (RCChE 2016). Menara Razak, Universiti Teknologi Malaysia (UTM), Kuala Lumpur. 21-22 November 2016.

8. F. S. Hashim, **H. W. Yussof**, M. A. K. M. Zahari, R. A. Rahman, R. M. Illias (2016). Screening conditions for enzymatic hydrolysis by Using Sacchariseb C6 of pre-treated fiber pressed oil palm frond (FPOPF). Symposium of Malaysian Chemical Engineers (SOMChE 2016), Miri

Marriott Resort & Spa, Jalan Temenggong Datuk Oyong Lawai, 98000 Miri, Malaysia. 1-3 December 2016.

9. K. H. Mah, **H. W. Yussof**, M. N. Abu Seman, A. W. Mohammad (2016). Effect of curing time on the pore size and effective thickness/porosity of polyester thin film composite nanofiltration membranes. *National Congress on Membrane Technology 2016 (NATCOM 2016),* Pulai Springs Resort, Johor, Malaysia. August 24-25, 2016.

10. K. H. Mah, **H. W. Yussof**, M. N. Abu Seman, A. W. Mohammad (2016). Synthesis and characterization of polyester thin film composite membrane via interfacial polymerization: fouling behaviour of uncharged solute. *Second International Conference on Chemical Engineering (ICCE2016),* The Jayakarta Suites Bandung, Boutique Suites, Hotel and Spa, Bandung, Indonesia. October 26-27, 2016.

11. K. H. Mah, **H. W. Yussof**, M. N. Abu Seman, A. W. Mohammad (2016). Polyester thin film composite nanofiltration membranes via interfacial polymerization: influence of five synthesis parameters on water permeability. *International Conference of Chemical Engineering & Industrial Biotechnology (ICCEIB2016),* Bayou Hotel, Malacca, Malaysia. November 28-30, 2016.

12. N. Fatihah M. Roli, **Hafizuddin Wan Yussof**, Syed M. Saufi , Mazrul N. Abu Seman,Abdul W. Mohammad (2016). Synthesis of Nanofiltration Membrane Developed from Triethanolamine and Trimesoyl Chloride for Separation of Xylose from Glucose. 9th Regional Conference on Chemical Engineering (RCChE 2016). Menara Razak, Universiti Teknologi Malaysia (UTM), Kuala Lumpur. 21-22 November 2016.

13. N. Fatihah M. Roli, **Hafizuddin W. Yussof**, Syed M. Saufi, Mazrul N. Abu Seman, Abdul W. Mohammad (2016). Separation Of Xylose From Glucose Using Pilot Scale Spiral Wound Commercial Membrane. National Congress on Membrane Technology (NATCOM2016). Pulai Spring Resort, Johor Bahru. 24-25 August 2016.

14. N. Fatihah M. Roli, **Hafizuddin W. Yussof**, Syed M. Saufi, Mazrul N. Abu Seman, Abdul W. Mohammad (2016). Separation Of Xylose From Glucose Using Spiral Wound Nanofiltration Membrane. Cross-Flow Parameters on Sugar Rejection. *Second International Conference on Chemical Engineering (ICCE2016),* The Jayakarta Suites Bandung, Boutique Suites, Hotel and Spa, Bandung, Indonesia. October 26-27, 2016.

15. Zulsyazwan Ahmad Khushairi, **Hafizuddin Wan Yussof**, and Norazwina Zainol. (2016). Optimization of Ferulic Acid Production from Oil Palm Frond Waste via Enzymatic Hydrolysis Using Soil Culture. 6th International Conference on Biotechnology for Wellness Industry (ICBWI). Equatorial Malacca, 17 – 18 August, 2016.

16. **H. W. Yussof**, S. S. Bahri, A. N. Phan and A. P. Harvey (2016). Effect of Oscillation Frequency and Amplitude on the Residence Time Distribution for Mesoscale Oscillatory Baffled Reactor. *International Conference of Chemical Engineering & Industrial Biotechnology (ICCEIB2016),* Bayou Hotel, Malacca, Malaysia. November 28-30, 2016.

17. **H. W. Yussof**, S. S. Bahri A. N. Phan and A. P. Harvey (2016). Enhancement of Bioethanol Production Using Mesoscale Oscillatory Baffled Reactor. *International Conference on Alternative Fuels (ICAF2016),* Kayseri, Turkey. 2 – 4 December, 2016.

18. **H. Wan Yussof** and F. S Hasyim (2016). A Factorial Analysis Study On Enzymatic Hydrolysis Of Fiber Pressed Oil Palm Frond For Bioethanol Production. 2nd International Conference On Advances In Renewable Energy Technologies (ICARET 2016). Bangi-Putrajaya Hotel, Malaysia. 23-25 February 2016.

19. **H. Wan Yussof,** Syamsutajri S. Bahri and A.P. Harvey (2015). Kinetic Modelling Of Transesterification Of Triacetin Using Synthesized Ion Exchange Resin (SIERs). ICMCE 2015: International Conference On Materials and Chemical Engineering. Hilton Jeddah, Saudi Arabia, 26-27 January 2015.

20. N. Fatihah M. Roli**, H. Wan Yussof,** Syed M. Saufi, Mazrul N. Abu Seman, Abdul W. Mohammad (2015). Synthesis Of Nanofiltration Membrane Developed From Different Concentration Of Triethanolamine (TEOA) For Separation Of Xylose From Glucose. 5th International Conference On Environment 2015 (ICENV 2015), Eastin Hotel, Penang, Malaysia. 18-19 August 2015.

21. K.H. Mah, **H. Wan Yussof,** M.N. Abu Seman, & A.W Mohammad (2015). Separation Of Xylose From Glucose Using Thin-Film Composite Membrane: A Study On Separation Performance And Fouling Properties. 5th International Conference On Environment 2015 (ICENV 2015), Eastin Hotel, Penang, Malaysia. 18-19 August 2015.

22. Nurul Atikah Mohd Rodzri, Zulsyazwan, Ahmad Khushairi, **Hafizuddin Wan Yussof**, N. Zainol and Rozaimi, Abu Samah. (2015). Main Factor Contribution in Factorial Screening for Ferulic Acid Production From Fibre-Pressed Oil Palm Frond (FPOPF) Using Mixed Culture. Asian Congress on Biotechnology 2015 (ACB2015). 15-19 November 2015.

23. Halifah Pagarra, Roshanida A. Rahman, Rosli Md Illias, Norzita Ngadi and **Hafizuddin Wan Yussof** (2015). Optimization and Characterization of Pectinase from *Aspergillus niger* Using *Nepherolepis biserrata* Pectin in Solid State Fermentation. Asian Congress on Biotechnology 2015 (ACB2015). 15-19 November 2015.

24. Mah Kah Hong, **Hafizuddin Wan Yussof**, Mazrul Nizam Abu Seman, Nurul Ain Jalanni, Norazwina Zainol. Study On Factors Affecting Separation Of Xylose From Glucose By Nanofiltration Using Composite Membrane Developed From Triethanolamine (TEOA) and Trimesoyl Chloride (TMC). 27th Symposium of Malaysian Chemical Engineers (SOMChe 2014) in conjunction with 21st Regional Symposium Chemical Engineering (RSCE 2014), Taylor`s University Lakeside Campus, Selangor, Malaysia. 29-30 October 2014.

25. **H. Wan Yussof** and Adam P. Harvey (2012). Tranesterification Of Triacetin Using Synthesized Ion Exchange Resins. 7th Edition of the International Conference On Environmental Catalyst. Lyon, France. 2-6 September 2012.

26. **H. Wan Yussof** and Adam P. Harvey (2012). Evaluation Of Synthesized Ion Exchange Resins (Siers) In The Tranesterification Of Triacetin. Malaysia International Conference On Trends In Bioprocess Engineering (MICOTriBE 2012). Meritus Pelangi Beach Resort & Spa Hotel, Langkawi. 3-5 July 2012.

27. Syamsutajri S. Bahri and **H. Wan Yussof** (2012). Characterization Of Nano-Structure Synthesized Ion Exchange Resins (SIERs). International Conference on Nanotechnology 2012 (ICONT 2012). MS Garden Hotel, Pahang. 30 May - 1 June February 2012.

28. N. Fatihah M. Roli and **H. Wan Yussof** (2016). Pilot Scale Spiral Wound Nanofiltration System For Processing Oil Palm Biomass Hydrolysate. 4th Conference On Future Biorefineries (2016). Adya Hotel, Langkawi. 12-15 March 2016.

29. **H. Wan Yussof** (2015). Design and Fabrication of Low Cost Portable Water Treatment System For Emergency Preparedness and Disaster Relief. Symposium Bersama Gunma Universiti, Jepun : Environmental, Science & technology. Auditorium Perpustakaan Universiti Malaysia Pahang, Kampus Gambang. 25 November 2015.

30. N. Fatihah M. Roli and **H. Wan Yussof** (2015). Design Of Pilot Scale Nanofiltration System For Separation of Xylose from Glucose. 2nd Seminar on Long Term Research Grant Scheme (LRGS) Project Future Biorefineries. Flamingo Hotel by the beach, Batu Feringgi, Penang. 17 January 2015

31. Mah Kah Hong, **Hafizuddin Wan Yussof** (2015). Separation of xylose from glucose with thin-film composite nanofiltration membrane. 2nd Seminar on Long Term Research Grant Scheme (LRGS) Project Future Biorefineries. Flamingo Hotel by the beach,Feringgi,Penang. 17 January 2015

32. N. Fatihah M. Roli and **H. Wan Yussof** (2015). Design Of Pilot Scale Nanofiltration System For Separation of Xylose from Glucose. 3rd Seminar on Long Term Research Grant Scheme (LRGS) Project Future Biorefineries. The Grand Beach Resort Port Dickson,Negeri Sembilan. 10-11 August 2015.

33. K.H Mah, **H. W. Yussof**, M. N. Abu Seman, A. W. Mohammad (2015). Impact Of Curing Time On Thin Film Composite Nanofiltration Membrane For Improving Xylose-Glucose Separation. 3rd Seminar on Long Term Research Grant Scheme (LRGS) Project Future Biorefineries. The Grand Beach Resort Port Dickson, Negeri Sembilan. 10-11 August 2015.

34. Mah Kah Hong, **Hafizuddin Wan Yussof.** Design of Pilot Scale Nanofiltration System for Separation of Xylose from Glucose. 1st Seminar on Long Term Research Grant Scheme (LRGS) Project Future Biorefineries. Puri Pujangga, UKM, Bangi. 12 June 2014.

35. Syamsutajri S. Bahri and **H. Wan Yussof** (2013). Development And Evaluation Of Mesoscale Oscillatory Baffled Reactor For Bioethanol Production. National Conference on Industry-Academia Initiatives in Biotechnology. Equatorial Hotel,Cameron Highlands ,Pahang. 5-7 December 2013.

UNDERGRADUATES

MAIN SUPERVISOR (UNDERGRADUATE RESEACH PROJECT)

ON GOING

1. **Muhammad Zufayri B. Ahmadol Jasmi** (KA16259) – Evaluation on Different Pretreatment on Coconut Fiber – 2019.

COMPLETED

1. **Siti Nazurah Bt. Zulkifli** (KA15178) – Evaluation on the Pretreatment of Kenaf Fiber – 2018.

2. **Nur Diyana Bt. Yahya** (KE14048) – Screening of the enzymatic hydrolysis process of oil palm biomass for production of xylooligosaccharides. – 2017.

3. **Anis Surayani Bt. Mat Yaacob** (KA15159) – Kinetic Modeling of Enzymatic hydrolysis of oil plam biomass using blended enzymes – 2017.

4. **Nor Akmalina Bt. Mustazar** (KA13115) – Optimization of Mercury Removal Using Palm Oil Fly Ashes – 2017

5. **Nurul Nabilah Bt. Sahari** (KE13099) – Factorial Analysis on the Enzymatic Hydrolysis of Pretreated Fibre Pressed Oil Palm Frond Using Saccharised C6 – 2017

6. **Yugasundari A/P Gopal** (KA13039) – Factorial Analysis on the Enzymatic Hydrolysis of Pretreated Fibre Pressed Oil Palm Frond UsingCellic CTECH2 – 2017

7. **Shivanandaa A/L Chandraseagar** (KA13168) – Mercury Removal from Wasterwater Using Oil Palm Ashes – 2016

8. **Nurbaity Bt. Ismail** (KE11049) – Optimization of Parameters Affecting Stevioside Recovery Using Mixed Matrix Membrane – 2016

9. **Imla Syafiqah Bt. Mohd Salleh** (KE11065) – Effect of Glucose Consumption in the Fermentation Enhances Bioethanol Productivity Using *Saccharomyces Cerevisiae* in Bioreactor – 2015

10. **Amalia Hasyyati Bt. Hayatuddin** (KE11059) – Stevioside Recovery Using Mixed Matrix Membranes from Polymeric Resin Amberlite XAD-4, XAD-7 and XAD-16 – 2015

11. **Siti Salmah Bt. Md Ali** (KE11063) – Factorial Design on Stevioside Recovery Using Mixed-Matrix Membrane from Polymeric Resin – 2015

12. **Nur Fatin Nadiah Bt. Fauzi** (KE11042) – Screening on the Factor Affecting the Alkaline Pretreatment of Fiber Pressed Oil Palm Frond - 2015

13. **Nur Fatin Bt. Muhammad** (KE11048) – Screening of Factors Affecting the Enzymatic Hydrolysis of Fiber Pressed Oil Palm Frond (FPOPF) – 2015

14. **Nur Amalina Syahira Bt. Jubri** (KE11043)- Factorial Analysis Study on Hydrolysis of Fibre Pressed Oil Palm Frond (FPOPFf) Using Cellic CTECH3 – 2014

15. **Nur Farhana Bt. Hamid** (KE11026) – The Effect of NaOH Concentration, Lime Concentration, Temperature and Time on Pre-Treatment of Oil Palm Frond on the Hydrolysis Process Using Cellic CTECH3 – 2014

16. **Nor Adilah Bt. Othman** (KE10031) – Production of Ethanol Using *Saccharomyces Cerevisiae* in Stirred Tank Reactor: Effect of Agitation Speed and Power Density – 2014

17. **Fazlin Bt. Masra** (KE11059) – Production of Polysaccharides from White Mushrooms (*Pleurotus florida*) by Submerged Culture Fermentation (SCF) – 2014

18. **Nora Adila Bt. Shaharuddin** (KE10035) – Effect of Processing Parameters on the Hydrolysis of Feruloyl Polysaccharide Using Feruloyl Esterases to Produce Ferulic Acid – 2014

19. **Mah Kah Hong** (KE10061) – Study on Factors Affecting Separation of Xylose from Glucose by Nanofiltration Using Composite Membrane Developed From Triethanolamine (TEOA) and Trimethyl Chloride (TMC) – 2014 (**Won FKKSA Best PSM Award in UMP Convocation 2014**)

20. **Siti Sarah Bt. Abdullah** (KE09059) – Optimization of Enzymatic Extraction of Stevia from *Stevia Rebaudiana* by Using Cellulase – 2013

21. **Ling Yeu Shin** (KE09016) – Study on the Effect of Processing Parameters in the Adsorption of Xylose from Glucose-Xylose Mixture – 2013

22. **Mohammad Aizzat B. Nawi** (KE09023) – Separation of Xylose From Glucose-Xylose Mixture Solution Using Ion Exchange Resins – 2013

23. **Muhammad Fais B. Haron** (KE09033) – Kinetic Modelling of Transesterification of Refined Palm Oil to Produce Biodiesel Using Strontium Oxide (SrO) as A Heterogenous Catalyst – 2013

24. **Charmine Nashira Bt. Shamsuddin** (KE09039) – Transesterfication of Refined Palm Oil to Produce Biodiesel Using Strontium Oxide as Heterogeneous Catalyst – 2013

25. **Nasihah Bt. Mohd Nor** (KE09021) – Enzymatic Extraction Assisted by Ultrasonication in the Extraction of Stevioside from *Stevia rebaudiana* Leaves – 2013

26. **Nurul Husna Bt. Hashim** (KE08036) – Study on the Effect of Processing Parameters on the Extraction of Stevioside Using Ultrasonic Extractor – 2012

27. **Nor Hayati Bt. Shahidan** (KE08002) – Extraction of Stevioside from *Stevia rebaudiana* Leaves Using Cellulase – 2012

28. **Normadhati Bt. Mustafa** (KE08043) – Study on the Effect of Processing Parameters on the Extraction of Stevioside Using Soxhlet Extractor – 2012

29. **Abdul Hakim B. Rahmad** – Study on the Effect of Substrates Concentration in the Production of Xylanase from *Aspergillus Niger* Using Palm Kernel Cake – 2006

30. **Mohd Fadhli B. Abdullah** – Production of Extracellular Protease Using *Bacillus subtilis*: Effect of Temperature and Agitation Speed – 2006

31. **Norhamly B. Mohd Nor** – Production of Xylanase Enzyme from *Aspergillus niger* Using Sugarcane Bagasse: The Effect of Substrate Concentration – 2006

MAIN SUPERVISOR (PLANT DESIGN PROJECT)

1. Production of 20,000 MT/Annum Bioethanol From Oil Palm Frond Via Hydrolysis and Fermentation With Red Yeast (February 2018):
    a. Wee Beng Siang – KA15250
    b. Mohamad Azharishah Bin Satar – KA16012
    c. Maavulisai A/P Ramu – KA15156
    d. Nor Azimah Bt. Mustapha – KA15109
    e. Mohamad Syazwan Bin Mohd Zain – KA15130

2. Production of 4,000 MT/Annum Maltodextrin via Enzymatic Hydrolysis Reaction of Cassava Starch Using Alpha-Amylase Enzyme (February 2018):
    f. Kelly Pang Yuan Jing – KE14027
    g. Noor Athirah Bt Dzulkefli – KE14008
    h. Aiman Farhana Bt Azaddin – KE14034
    i. Muhammad Yusreen Bin Ismail – KE13048
    j. Mckendree Jison – KC14019

3. Production of 31,250 MT/Annum High Fructose Syrup From Tapioca Starch (June 2017):
    a. Hew Chan Phang – KE13027
    b. Mah Ji Heng – KE13033
    c. Muhamad Norhafiz B. Nordin – KE13030
    d. Muhammad Syafiq B. Mohd Shafei – KE13036
    e. Nurul Syafiqah Bt. Rosli – KE13018

4. Production of 100 MT/Annum Acetic Acid from Glucose via Fermentation Using *Acetobacter aceti* (June 2016):
    a. Josephine Wong Sian Chee – KE12056
    b. Siti Fairuz Bt. Suffian – KE12033
    c. Khoirun Nikmah Bt. Imam Sopingi – KE12018

5. Production of 100 MT/Annum Acetic Acid from Glucose via Fermentation Using *Acetobacter aceti* (June 2016):
    a. Josephine Wong Sian Chee – KE12056
    b. Siti Fairuz Bt. Suffian – KE12033
    c. Khoirun Nikmah Bt. Imam Sopingi – KE12018

6. Production of 5 000 MT/Annum Bioethanol from Crude Glycerol via Fermentation Using *Clostridium pasteurianum* (January 2015):
    a. Choo Wei Chun – KE11037
    b. Ooi Chee Beng – KE11047
    c. Hor Chee Heng – KE11029
    d. Noratiqah Bt. Chik – KE11030
    e. Logapriya A/P Logamaintan – KE11024

7. Production of 5 000 MT/Annum Polyhydroxybutyrate from Sugar Cane Molasses via Fermentation Using *Alcaligenes latus* (June 2014):
    a. Jayshree A/P Thuraisingam – KE10008
    b. Chai Seng Miao – KE10025
    c. Khor Ken Hwan – KE10040
    d. Wong Wei Ding – KE10041

8. Production of 20 MT/Annum Xylanase from Citrus Waste via Fermentation Using *Aspergillus niger* (January 2013):
    a. Siti Salbiah Bt. Mutalib – KE09003
    b. Kanagaraj A/L Rajandran – KE09020
    c. Mohd Nazarni B. Che Isa – KE10063
    d. Nik Fatima Bt. Nek Kamarzaman – KE09012
    e. Aiza Bt. Abdul Rahman – KE09029

9. Production of 20 000 MT/Annum Biodiesel from *Chlorella prortothecoides* Using Photobioreactor (January 2012):
    a. Chew Bee Tin – KE08003
    b. Adnor Al-Hilmi B. Adam – KE08019
    c. Ma Umaira Suhaddha Bt. Zainal Abidin – KE08026
    d. Muhamad Syafiq Eidham B. Ab Rashid – KE08044