



## CURRICULUM VITAE

### ASSOC. PROF. DR. SALMIATON ALI

Department of Chemical and Environmental Engineering. Faculty of Engineering. Universiti Putra Malaysia. 43400 UPM Serdang. Selangor.



**Tel.** : +603-97696297 / +6012-3729295  
**E-mail** : [mie@upm.edu.my](mailto:mie@upm.edu.my)  
**ORCID** : <https://orcid.org/0000-0001-6624-7303>  
**Scopus** : 57193906995  
**Web of Sci.** : AAE-8443-2020  
**Website** : <https://eng.upm.edu.my/>

#### Academic Qualifications

- Ph.D. Chemical Engineering, 2004, University of Manchester Institute of Science and Technology (UMIST), Manchester, UK
- B. S. Chemical Engineering, 1994, Polytechnic Institute of New York University, New York, USA.

#### Area of Interest

- Chemical and environmental engineering
- Solid waste recycling, minimization and recovery
- Catalytic gasification and pyrolysis
- Fuel and energy recovery from waste, waste-to-wealth

#### Appointment

Employer	Designation	Department	Start Date	End Date
UPM	Lecturer / Senior Lecturer / Assoc. Prof.	Department of Chemical and Environmental Engineering	4/01/2004	To date
UPM	Program Coordinator	Master in Environmental Engineering	01/01/2017	31/08/2019
UPM	Program Coordinator	Master in Environmental Technology Management	2005	2016
UPM	Tutor	Department of Chemical and Environmental Engineering	01/02/1999	13/01/2004
Permint Minerals Sdn. Bhd., Kuala Terengganu	Chemist Site	Laboratory	01/08/1994	31/01/1999

#### Professional Qualification/ Membership/ Affiliation

- Associate Member, Institute of Chemical Engineers (IChemE)
- Individual Member, International Solid Waste Association (ISWA)

- Member, Board of Engineers Malaysia (BEM)

### Scientific Experience and Specialisation

Organisation	Position	Start Date	End Date	Expertise
Permint Minerals Sdn. Bhd., Kuala Terengganu	Chemist	01/08/1994	31/01/1999	Gold mining, extraction and analysis
UPM	Lecturer /Researcher	14/01/2004	To date	Environmental Engineering (waste minimization and recovery)
University of Manchester Institute of Science and Technology (UMIST), UK.	Postgraduate / Researcher	01/10/1999	30/11/2003	Feedstock recycling of polymer waste

### Publications

#### Journals

1. K.A.K.M. Hakim, E.S. Tan, S.H. Habib, R.S.R.M. Hafriz, **A. Salmiaton** (2024). Investigation of waste-derived and low-cost calcium oxidebased catalysts in co-pyrolysis of EFB-HDPE to produce high quality bio-oil. *Journal of Analytical and Applied Pyrolysis*, 177, 106375.
2. C.C. Seah, S.H. Habib, R.S.R.M. Hafriz, A.H. Shamsuddin, N.M. Razali, **A. Salmiaton** (2024). Prospective energy content assessment of waste biomass and polymer via preliminary analysis. *Results in Engineering*, 22, 102301.
3. N.H. Mohd Zahari, **A. Salmiaton**, S. Sobri, N.A. Mohd Nasir, I.N. Shafizah (2024). Utilization of aluminum dross as a cement replacement material for sustainable concrete development. *Pertanika Journal of Science & Technology*, 32 (2): 761 – 779.
4. S. Sinurat, R.S.R.M. Hafriz, S.H. Habib, **A. Salmiaton**, S. Izhar, M.R.A. Hamid, S. Sobri, N.M. Razali (2023). Preparation of a single metal catalyst loaded on alumina support to refine waste tire pyrolysis oil (WTPO) via catalytic hydrogenation. *Journal of Analytical and Applied Pyrolysis*, 176, 106236.
5. C.C. Seah, S.H. Habib, R.S.R.M. Hafriz, A.H. Shamsuddin, **A. Salmiaton** (2023). Can waste eggshell replace commercial zeolites as catalyst for bio-oil production? *Journal of Analytical and Applied Pyrolysis*, 175, 106213.
6. C.C. Seah, C.H. Tan, N.A. Arifin, R.S.R.M. Hafriz, **A. Salmiaton**, S. Nomanbhay, A.H. Shamsuddin (2023). Co-pyrolysis of biomass and plastic: Circularity of wastes and comprehensive review of synergistic mechanism. *Results in Engineering*, 17, 100989.
7. U. Shafih, R.S.R.M. Hafriz, N.A. Arifin, I. Nor Shafizah, A. Idris, **A. Salmiaton**, N.M. Razali (2023). Catalytic deoxygenation with SO<sub>4</sub><sup>2-</sup>-Fe<sub>2</sub>O<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub> catalyst: Optimization by Taguchi method. *Results in Engineering*, 17, 100959.
8. S.H. Ali, R.S.R.M. Hafriz, A.H. Shamsuddin, **A. Salmiaton** (2023). Production of liquid biofuel from sludge palm oil (SPO) using heterogeneous catalytic pyrolysis. *Journal of Applied Science and Engineering*, 26(4), 529-538.
9. K.Y. Koh, **A. Salmiaton**, H. Hizam, M.I. Aida Isma (2023). Fabrication of low dielectric chicken feather-epoxidized palm oil composite for semiconductor application. *AIP Conference Proceedings*, 2544 (1), 020020.

- 
10. M.S. Md Said, A.M.A. Ahmed, **A. Salmiaton**, T.S.Y. Choong, W.A.K.G. Wan Azlina (2023). Prediction of tar yield produced from devolatilization of empty fruit bunch in a fluidized-bed reactor using pseudo-equilibrium model. *Chemical Engineering Journal Advances*, 16, 100521.
  11. M.F.M. Ahmad Zamri, A.H. Shamsuddin, **A. Salmiaton**, R. Bahru, J. Milano, S.K. Tiong, I. Md Rizwanul Fattah, R.S.R.M. Hafriz (2023). Recent advances of triglyceride catalytic pyrolysis via heterogenous dolomite catalyst for upgrading biofuel quality: A review. *Nanomaterials*, 13,1947.
  12. N. Harith, R.S.R.M. Hafriz, N.A. Arifin, Ee Sann Tan, **A. Salmiaton**, A.H. Shamsuddin (2022). Catalytic co-pyrolysis of blended biomassplastic mixture using synthesized metal oxide (MO)-dolomite based catalyst. *Journal of Analytical and Applied Pyrolysis*, 168, 105776.
  13. N. Asikin-Mijan, G. Abdulkareem-Alsultan, M.S. Mastuli, **A. Salmiaton**, M.A. Mohamed, H.V. Lee, Y.H. Taufiq-Yap (2022). step catalytic deoxygenation-cracking of tung oil to bio-jet fuel over CoW-/silica-alumina catalysts. *Fuel*, 325, 124917.
  14. R.S.R.M. Hafriz, I. Nor Shafizah, N.A. Arifin, A.H. Maisarah, **A. Salmiaton**, A.H. Shamsuddin (2022). Comparative, reusability and regenerability study of potassium oxide-based catalyst in deoxygenation reaction of WCO. *Energy Conversion and Management: X*, 13, 100173.
  15. R.S.R.M. Hafriz, N.A. Arifin, **A. Salmiaton**, R. Yunus, Y.H. Taufiq- Yap, N.M. Saifuddin, A.H. Shamsuddin (2022). Multiple-objective optimization in green fuel production via catalytic deoxygenation reaction with NiO-dolomite catalysts. *Fuel*, 308, 122041.
  16. R.S.R.M. Hafriz, I.N. Shafizah, N.A. Arifin, **A. Salmiaton**, Y.H. Taufiq- Yap, A.H. Shamsuddin (2021). Effect of Ni/Malaysia dolomite catalyst synthesis technique reaction activity of waste cooking oil. *Renewable Energy*, 178, pp.128-143.
  17. M.A.A. Mohammed, I.N. Shafizah, **A. Salmiaton**, N.A. Arifin, R.S.R.M. Hafriz, W.A.K.G. Wan Azlina, Y.H. Taufiq-Yap, A.H. Shamsuddin (2021), H<sub>2</sub>-rich and tar-free downstream gasification reaction of EFB by using the Malaysia dolomite as a secondary catalyst. *Catalysts*, 11(4), 447.
  18. M.H. Elseknidy, **A. Salmiaton**, I.N. Shafizah, A.H. Saad (2020), A study on mechanical properties of concrete incorporating aluminum dross, fly ash, and quarry dust. *Sustainability*, 12(21), pp.1-13, 9230.
  19. R.S.R.M. Hafriz, I. Nor Shafizah, **A. Salmiaton**, N.A. Arifin, R. Yunus, Y.H. Taufiq-Yap, S. Abd Halim (2020), Comparative study of transition metal-doped calcined Malaysian dolomite catalysts for WCO deoxygenation reaction. *Arabian Journal of Chemistry*, 13(11), 8146-8159.
  20. A.K. Mageed, D.A.B. Radiah, **A. Salmiaton**, S. Izhar, M.A. Razak, B.V. Ayodele. (2020). Dehydrogenation of cyclohexanol to cyclohexanone over nitrogen-doped graphene supported Cu catalyst. *Bulletin of Chemical Reaction Engineering & Catalysis*, 15(2), 568-578.
  21. A.B. Makama, **A. Salmiaton**, T.S.Y. Choong, M.R.A. Hamid, N. Abdullah, E. Saion (2020), Influence of parameters and radical scavengers on the visible-light-induced degradation of ciprofloxacin in ZnO/SnS<sub>2</sub> nanocomposite suspension: Identification of transformation products. *Chemosphere*, 253, 126689.
  22. M.A.A. Mohammed, I. Nor Shafizah, **A. Salmiaton**, W.A.K.G. Wan Azlina, Y.H. Taufiq-Yap (2020), The Evaluation on Three Types of Malaysian Dolomites as a Primary Catalyst in Gasification Reaction of EFB and Tar Cracking Efficiency. *Frontiers in Energy Research*, vol. 8, (no. 38), 1-11.
  23. R. Alshayer, **A. Salmiaton**, T. Mohammad, A. Idris, C.F. Ishak (2020). Removal Efficiencies of Constructed Wetland Planted with Phragmites and Vetiver in Treating Synthetic Wastewater Contaminated with High Concentration of PAHs. *Sustainability*, vol. 12, 3357, 1-18.
  24. M.H. Elseknidy, **A. Salmiaton**, A.H. Saad, A.F. Kineber, I. Nor Shafizah (2020). VE Application in Material Selection Assessment and Performance of Aluminum Dross as Cement Replacement. *International Journal of Advanced Science and Technology*, vol. 29 (no.6), 5803-5818.
  25. F.H. Kamil, **A. Salmiaton**, R.S.R.M. Hafriz, I.R. Hussien, R. Omar (2020). Characterization and Application of Molten Slag as Catalyst in Pyrolysis of Waste Cooking Oil. *Bulletin of Chemical Reaction Engineering & Catalysis*, vol. 15(1). 119-127.
-

- 
26. O. Qistina, **A. Salmiaton**, T.S.Y. Choong, Y.H. Taufiq-Yap, S. Izhar (2020). Optimization of Carbon Nanotune-Coated Monolith by Direct Liquid Injection Chemical Vapor Deposition Based on Taguchi Method. *Catalysts*, vol. 10, 67-84.
  27. A.K. Mageed, A.B. Dayang Radiah, **A. Salmiaton**, S. Izhar, M. Abdul Razak (2019). Nitrogen doped graphene-supported trimetallic CuNiRu nanoparticles catalyst for catalytic dehydrogenation of cyclohexanol to cyclohexanone. *Journal of King Saud University – Science*, vol. 31 (4), 878-885.
  28. O.H. Heba, **S. Ali**, N. Abdullah (2019). Chelate Coupling with Pineapple Leaves as a Modified Bio-Sorbent for Lead Ions (II) Removal. *International Journal of Environmental Science and Technology*, vol. 16 (No. 11), 7293-7304.
  29. R. Alshayer, **A. Salmiaton**, T.A. Mohammad, A. Idris, C.F. Ishak. (2019). Assessment of Growth Characteristics due to Polycyclic Aromatic Hydrocarbons Uptake by Two Different Wetland Plants (Phragmites Karka and Vetiveria Zizaniodes). *Journal of Engineering Science and Technology*, vol. 14 (No. 6), 3406-3420.
  30. M.T. Bashir, **A. Salmiaton**, A. Idris, R. Harun (2018). Monitoring Kinetic and Thermodynamic Parameters of Fluoride Adsorption from Aqueous Solution by PKS-Based Anion Resins. *Journal of Mechanical Engineering and Sciences*, vol. 12 (2), 3624-3632. (Scopus)
  31. Hamidah Abd. Hamid, Robiah Yunus, Umer Rashid, Thomas S.Y. Choong, **Salmiaton Ali**, Azhari Muhammad Syam (2018). Synthesis Study of High Oleic Palm Oil-based Trimethylolpropane Triesters: Response Surface Methodology Based Optimization. *Chiang Mai Journal of Science*, vol. 45 (2), 984-996. (Q3; Scopus)
  32. R.S.R.M. Hafriz, **A. Salmiaton**, R. Yunus, Y.H. Taufiq-Yap (2018). Green Biofuel Production via Catalytic Pyrolysis of Waste Cooking Oil using Malaysia Dolomite Catalyst. *Bulletin of Chemical Reaction Engineering & Catalysis*, vol. 13 (93), 489-501. (Q4; Scopus)
  33. Ahmed Shamil Albazzaz, Abdulkareem Ghassan Alsultan, **Salmiaton Ali**, Yun Hin Taufiq-Yap, Mohamad Amran Mohd. Salleh, Wan Azlina Wan Abdul karim Ghani (2018). Carbon Monoxide Hydrogenation on Activated Carbon Supported Co-Ni Bimetallic Catalysts via Fischer-Tropsch Reaction to Produce Gasoline. *Journal of Energy, Environmental & Chemical Engineering*, vol. 3 (3), 40-53.
  34. Alyaa K. Mageed, A.B. Dayang Radiah, **A. Salmiaton**, Shamsul Izhar, Musab Abdul Razak (2018). Study the Thermal Stability of Nitrogen Doped Reduce Graphite Oxide Supported Copper Catalyst. *Journal of Cluster Science*. August 2018; DOI: 10.1016/j.jksus.2018.08.007 (JCR, IF = 1.715, Q2)
  35. M.T. Bashir, **S. Ali**, I. Azni, R. Harun (2018). A Sustainable Approach of Nitrate Adsorption from Water using Palm Oil Agricultural Waste. *Asian Jr. of Microbiology Biotechnology Environmental Science*, vol. 20 (2), 451-457 (Scopus)
  36. R.M.H. Raja Shahrizzaman, **A. Salmiaton**, R. Yunus, Y.H. Taufiq-Yap (2018). Modified Local Carbonate Mineral as Deoxygenated Catalyst for Biofuel Production via Catalytic Pyrolysis of Waste Cooking Oil. *AIP Conference Proceedings*, vol 2030, 020006.
  37. M.T. Bashir, **A. Salmiaton**, A. Idris, R. Harun (2017). Kinetic and Thermodynamic Study of Nitrate Adsorption from Aqueous Solution by Lignocellulose-based Anion Resins. *Desalination and Water Treatment*, vol. 62, 449-456 (Scopus, IF = 1.272)
  38. F.H. Kamil, **A. Salmiaton**, R.M.H.R. Shahrizzaman, R. Omar, A.G. Alsultsan. (2017). Characterization and Application of Aluminum Dross as Catalyst in Pyrolysis of Waste Cooking Oil. *Bulletin of Chemical Reaction Engineering & Catalysis*, vol. 12 (no. 1), 81-88 (Scopus, IF = 0.533).
  39. A.B. Makama, **A. Salmiaton**, E.B. Saion, T.S.Y. Choong, N. Abdullah. (2017). Photocatalytic Reduction of Aqueous Cr(VI) with CdS under Visible Light Irradiation: Effect of Particle Size, *Bulletin of Chemical Reaction Engineering & Catalysis*, vol. 12 (no. 1), 62-70 (Scopus, IF = 0.533).
-

- 
40. A.K. Mageed, A.B. Dayang Radiah, **A. Salmiaton**, S.I. Siajam, M. Abdul Razak, H.M. Yusoff, F.M. Yasin, S. Kamarudin (2016). Preparation and Characterization of Nitrogen Doped Reduced Graphene Oxide Sheet. *International Journal of Applied Chemistry*, vol. 12 (no. 1), 104-108.
  41. A.B. Makama, **A. Salmiaton**, E.B. Saion, T.S.Y. Choong, N. Abdullah (2016), Microwave-Assisted Synthesis of Porous ZnO/SnS Heterojunction and its Application in Visible Light Degradation of Ciprofloxacin. *AIP Conference Proceedings*, vol. 1733, 020018
  42. A.B. Makama, **A. Salmiaton**, E.B. Saion, T.S.Y. Choong, N. Abdullah (2016), Synthesis of CDs Sensitized TiO<sub>2</sub> Photocatalysts: Methylene Blue Adsorption and Enhanced Photocatalytic Activities. *International Journal of Photoenergy*, vol. 2016 (article ID 2947510), 1-14 (Scopus, IF = 1.563).
  43. H.A. Hamid, R. Yunus, U. Rashid, T.S.Y. Choong, **A. Salmiaton**, A.M. Syam (2016), Synthesis of High Oleic Palm Oil-Based Trimethylolpropane Esters in a Vacuum Operated Pulsed Loop Reactor, *Fuel*, vol. 166, 560-566.
  44. F.E. Babadi, R. Yunus, S.A. Rashid, M.A.M. Salleh, **A. Salmiaton** (2015), New Coating Formulation for the Slow Release of Urea using a Mixture of Gypsum and Dolomitic Limestone, *Particuology*, vol. 23, 62-67.
  45. **A. Salmiaton**, F. Danafar (2015), Controlled-Release Fertilizers: Advances and Challenges, *Life Science Journal*, vol. 12 (No. 11), 33-45.
  46. A.I.M. Idris, **A. Salmiaton**, R. Omar (2015), Pyrolysis-Solvent Extraction of Chicken Fats and Skins for Bio-Oil Production, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, vol. 37 (no. 23), 2543-2549.
  47. M.T. Bashir, **A. Salmiaton**, M.M. Nourouzi, A. Idris, R. Harun (2015), Fluoride Removal by Chemical Modification of Palm Kernel Shell-Based Adsorbent: A Novel Agricultural Waste Utilization Approach, *Asian Journal of Microbiology, Biotechnology and Environmental Sciences*, vol. 17 (no. 3), 533-542.
  48. A. M. A. Ahmed, **A. Salmiaton**, T.S. Y. Choong and W. A. K. G. Wan Azlina (2015), Review of Kinetic and Equilibrium Concepts for Biomass Tar Modeling by using Aspen Plus, *Renewable and Sustainable Energy Reviews*, vol. 52, 1623-1644 (ISI, IF = 5.901).
  49. A. B. Makama, **A. Salmiaton**, E. B. Saion, T. S. Y. Choong and N. Abdullah (2015), Microwave-Assisted Synthesis of Porous ZnO/SnS<sub>2</sub> Heterojunction and Its Enhanced Photoactivity for Water Purification, *Journal of Nanomaterials*, vol. 2015 (article ID 108297), 1-13 (Scopus, IF = 1.644).
  50. M. I. Aida Isma, **A. Salmiaton** and K. B. Nur Dinie (2015). Plastic Wastes Pyrolysis in a Fluidized Bed Reactor for Potential Diesel Production, *International Journal of Environmental Science and Development*, vol. 6 (8), 606-609 (referred).
  51. S. Sivasangar, Z. Zainal, **A. Salmiaton** and Y.H. Taufiq-Yap (2015). Supercritical Water Gasification of Empty Fruit Bunches from Oil Palm for Hydrogen Production, *Fuel*, vol. 143, 563-569 (ISI, IF = 3.520).
  52. H. W. Goh, **A. Salmiaton**, N. Abdullah and A. Idris (2015). Time, Temperature and Amount of Distilled Water Effects on the Purity and Yield of Bis(2-hydroxyethyl) Terephthalate Purification System, *Bulletin of Chemical Reaction Engineering & Catalysis*, vol. 10 (2), 143-154 (Scopus, IF = 1.122).
  53. C. H. Ng, **A. Salmiaton** and H. Hizam (2014). Catalytic Pyrolysis and a Pyrolysis Kinetic Study of Shredded Printed Circuit Board for Fuel Recovery, *Bulletin of Chemical Reaction Engineering & Catalysis*, vol. 9 (3), 224-240 (Scopus, IF = 1.122)
  54. A.B. Makama, **A. Salmiaton**, N. Abdullah, T.S.Y. Choong and E.B. Saion (2014). Recent Developments in Purification of Single Wall Carbon Nanotubes. *Separation Science and Technology*, vol 49 (17), 2797-2812. (ISI; IF = 1.164)
  55. Muhammad Tariq Bashir, **Salmiaton Ali**, Moinuddin Ghauri, Azni Adris and Razif Harun (2013). Impact of Excessive Nitrogen Fertilizers on the Environment and Associated Mitigation Strategies. *Asian Jr. of Microbiol. Biotech. Env. Sc.* Vol. 15, No. (2), 213-221. (Scopus)
-

- 
56. **Salmiaton Ali**, Aida Isma Mohd. Idris and Hazmin Mansor (2013). Toxicity Immobilization of Refinery Sludge Containing Heavy Metals via Vitrification Process. *International Journal of Research in Engineering and Technology*, vol. 2 (10), 153-157. (ResearchGate; IF = 1.962)
  57. Moinuddin Ghauri, Abrar Inayat, Muhammad Tariq Bashir, **Salmiaton B. Ali** and Keith R. Cliffe (2013). High Pressure Oxydesulphurisation of Coal—A Parametric Study. *Energies*, vol. 6, 1930-1943. (Scopus, IF: 1.844)
  58. A. H. M. Ali, S. Sobri, **A. Salmiaton** and M.Y. Faizah (2013). Recovery of Heavy Metals from Spent Etching Waste Solution of Printed Circuit Board (PCB) Manufacturing. *Pertanika J. Sci. & Technol.*, vol. 21 (1), 367 – 378. (Scopus)
  59. Muhammad Tariq Bashir, **Salmiaton Ali**, Azni Adris and Razif Haroon (2013). Health Effects Associated with Fluoridated Water Sources—A Review of Central Asia. *Asian Journal of Water, Environment and Pollution*, Vol. 10, No. 3 (2013), pp. 29–37. (Scopus)
  60. M. A. A. Mohammed, **A. Salmiaton**, W. A. K. G. Wan Azlina, M. S. Mohamad Amran, and Y. H. Taufiq-Yap (2013). Preparation and Characterization of Malaysian Dolomites as a Tar Cracking Catalyst in Biomass Gasification Process. *Journal of Energy*, vol 2013, 1-8. (GoogleScholar)
  61. Noorshamsiana Abdul Wahab, Astimar Abdul Aziz, Nurizzati Berahim, **Salmiaton Ali**, Norhafizah Abdullah, Siti Mazlina Mustapa Kamal and Nor Faizah Jalani (2013). Combined Effect of Operational Variables on Aqueous Enzymatic Oil Extraction from Palm Pressed Fibre. *Journal of Oil Palm Research*, vol. 25 (2), 197-207. (Scopus; IF = 0.230)
  62. M. Aminian, M. Zainal Abidin Ab Kadir, **A. Salmiaton**, Wan Fatimahamah, Taufiq Ishak and M. Izadi (2013). Correlation of FULfural and Moisture Content with Age of Transformers. *iIEEE 7<sup>th</sup> International Power Engineering and Optimization Conference Proceedings (PEOCO2013)*, 366-368. (Scopus)
  63. Y.H. Taufiq-Yap, S. Sivasangar and **A. Salmiaton** (2012). Enhancement of hydrogen production by secondary metal oxide dopants on NiO/CaO material for catalytic gasification of empty palm fruit bunches. *Energy*, vol 47, 158 – 165. (ISI, IF=3.651)
  64. Elnashaie, W.A.K.Wan Azlina, M.S. Mohd. Amran, A.B. Dayang Radiah and **A. Salmiaton** (2013). Sustainable Development in Chemical and Biological Engineering Education. *Procedia - Social and Behavioral Sciences*, vol. 102, 490 – 498. (Scopus)
  65. A. A. Syarifuddeen, A. Norhafizah and **A. Salmiaton** (2012). Glycolysis of Poly (Ethylene Terephthalate) (PET) Waste under Conventional Convection-Conductive Glycolysis. *International Journal of Engineering Research & Technology*. Vol. 1 (10), 1-8 (ResearchGate; IF = 1.962)
  66. H.W. Goh, **A. Salmiaton**, N. Abdullah and A. Idris (2012). Process Simulation of Two-Stage Evaporation and Crystallization Systems for Bis(2-hydroxyethyl) Terephthalate Recovery. *Journal of Applied Sciences*, vol 12 (15), 1547-1555. (Scopus)
  67. M.I. Aida Isma, **A. Salmiaton** and O. Rozita. Pyrolysis – Solvent Extraction of Chicken Fats and Skins for Bio-Oil Production. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* (accepted - ID: 675411 DOI:10.1080/15567036.2012.675411). (ISI; IF = 0.52)
  68. Wan Ab Karim Ghani, Wan Azlina; Esfahani, Reza Moghadam; Mohd Salleh, Mohammad Amran; **Ali, Salmiaton** (2012). Hydrogen rich production from Malaysian Palm kernel shell by applying air gasification in fluidized bed reactor, *Energy and Fuels*, 2012, 26 (2), pp 1185-1191. (Scopus, IF = 2.853)
  69. M.A.A. Mohammed, **A. Salmiaton**, W.A.K.G. Wan Azlina, M.S. Mohamad Amran (2012). Gasification of Oil Palm Empty Fruit Bunches: A Characterization and Kinetic Study. *Bioresource Technology*, vol. 110, 628-636. (Scopus, IF = 4.750)
  70. M.A.A. Mohammed, **A. Salmiaton**, W.A.K.G. Wan Azlina, M.S. Mohamad Amran, R. Omar, Y.H. Taufiq-Yap, A. Fakhru'l-Razi. (2012). Catalytic Gasification of Empty Fruit Bunch for Enhanced Production of Hydrogen Rich Fuel Gas. *Pertanika J. Sci. & Technol.*, vol. 20 (1), 139 - 149. (Scopus)
  71. Aida Isma M.I., Rozita Omar, **Salmiaton Ali** (2012). Vitrification of Petrochemical Sludges containing Heavy Metals. *SEGi Review*, vol. 5, no. 1, p. 89-94. (refereed)
-

- 
72. **A. Salmiaton**, A.A. Garforth (2011). Multiple Use of Waste Catalysts with and without Regeneration for Waste Polymer Cracking. *Waste Management*, vol. 31, 1139-1145. (Scopus, IF = 2.485)
  73. Muhammad Tariq Bashir, **Salmiaton Ali** and Adnan Bashir (2012). Health Effects from Exposure to Sulphates and Chlorides in Drinking Water. *Pakistan Journal of Medical and Health Sciences*, vol. 6 (2), 648-652. (refereed)
  74. M.A.A. Mohammed, **A. Salmiaton**, W.A.K.G. Wan Azlina, M.S. Mohammad Amran, A. Fakhru'l-Razi (2011). Air Gasification of Empty Fruit Bunch for Hydrogen-Rich Gas in a Fluidized-Bed Reactor. *Energy Conversion and Management*, vol. 52, 1555-1561. (ISI, Scopus, IF = 2.775)
  75. M.A.A. Mohammed, **A. Salmiaton**, W.A.K.G. Wan Azlina, M.S. Mohammad Amran, A. Fakhru'l-Razi, Y.H. Taufiq-Yap (2011). Hydrogen Rich Gas from Oil Palm Biomass as a Potential Source of Renewable Energy in Malaysia. *Renewable and Sustainable Energy Reviews*, vol. 15, 1258-1270. (ISI, Scopus, IF = 5.627)
  76. M.A.A. Mohammed, **A. Salmiaton**, W.A.K.G. Wan Azlina, M.S. Mohammad Amran (2011). Gasification of Empty Fruit Bunch for Hydrogen-Rich Fuel Gas Production. *Journal of Applied Sciences*, vol. 11, no. 13, 2416-2420. (Scopus)
  77. K.S. Mohd. Taha, **A. Salmiaton**, S. Shafreeza (2011). Concentration Profile Behavioral from Digestate Television Printed Circuit Board for Metal Recovery via Electrolysis. *Journal of Applied Sciences*, vol. 11, no. 13, 2436-2439. (Scopus)
  78. **A. Salmiaton**, Y.J. Hao, L.M. Zhu (2009). Blending Process of Recycled EPDM and EVA at Various Ratios. *International Journal of Engineering and Technology*, vol. 6, no. 2, 2009, p. 30-38. (ProQuest, GoogleScholar)
  79. M. Khalid, C. T. Ratnam, C. A. Luqman, **A. Salmiaton**, T. S. Y. Choong, H. Jalaludin (2009). Thermal and Dynamic Mechanical Behavior of Cellulose and Oil Palm Empty Fruit Bunch (OPEFB)-Filled Polypropylene Biocomposites. *Polymer-Plastics Technology and Engineering*, vol. 48, pp. 1244-1251. (SCIE, IF = 1.481)
  80. **A. Salmiaton** (2009). Characterization of Mixed Plastic Wastes as a Potential Renewable Energy Resource. *ISESCO Science and Technology Vision*, vol.5, no.8, p. 2-6. (refereed)
  81. M. Khalid, **A. Salmiaton**, T.G. Chuah, C.T. Ratnam, S.Y. Thomas Choong (2008). Effect of MAPP and TMPTA as Compatibilizer on the Mechanical Properties of Cellulose and Oil Palm Fiber Empty Fruit Bunch-Propylene Biocomposites. *Composite Interfaces*, vol.15, no.2-3, p. 251-262. (Scopus, IF = 0.63)
  82. M. Khalid, C.T. Ratnam, T.G. Chuah, **Salmiaton Ali**, Thomas S.Y. Choong (2008). Comparative Study of Polypropylene Composites Reinforced with Oil Palm Empty Fruit Bunch Fiber and Oil Palm Derived Cellulose. *Materials and Design*, vol. 29, pp. 173-178. (Scopus, IF = 2.913)
  83. M. Khalid, **A. Salmiaton**, C.T. Ratnam, C.A. Luqman (2008). Effect of Trimethylolpropane Triacrylate (TMPTA) on the Mechanical Properties of Palm Fiber Empty Fruit Bunch and Cellulose Fiber Biocomposite. *Journal of Engineering Science and Technology*, vol.3 no. 2. p. 153-162. (Scopus)
  84. L.C. Abdullah, L.I. Wong, M. Saari, **A. Salmiaton**, M.S. Abdul Rashid (2007). Particulate Matter Dispersion and Haze Occurrence Potential Studies at a Local Palm Oil Mill. *International Journal of Environmental Science and Technology*, vol. 4, no. 2, p. 271-278, 2007. (Scopus, IF = 1.844)
  85. Md. Munir H.Khan, **S. Ali**, A. Fakhru'l-Razi and MD.Z. Alam (2007). Use of Fungi for the Bioconversion of Rice Straw into Cellulose Enzyme. *Journal of Environmental Science and Health Part B*, vol. 42, p. 381-386. (SCIE, IF = 1.119)
  86. **A. Salmiaton**, A. Garforth (2007). Waste Catalysts for Waste Polymer. *Waste Management*, vol. 27, pp. 1891-1896. (Scopus, IF = 2.485)
  87. Thomas S.Y. Choong, Saad Abbas, Abdul Rashid Shariff, Rohaya Halim, Mohd Halim S. Ismail, Robiah Yunus, **Salmiaton Ali**, Fakhru'l-Razi Ahmadun (2006). Digital Image Processing of Palm Oil Fruits. *International Journal of Food Engineering*, Vol. 2, No. 2, article 7. (ISI, Scopus, IF = 0.463)
-

- 
88. **Salmiaton Ali**, Arthur Garforth, A. Fakhru'l-Razi (2006). Recycling of Polymer Waste with Fluid Catalytic Cracking Catalysts. *Journal of Environmental Science and Health, Part A: Toxic/ Hazardous Substance & Environmental Engineering*, Vol. 41, No. 6, p. 1145-1154. (SCIE, IF = 1.25)
  89. S.A. Abbas, **S. Ali**, S.I. Mohd. Halim, A. Fakhru'l-Razi, R. Yunus and T.S.Y. Choong (2006), Effect of Thermal Softening on the Textural Properties of Palm Oil Fruitlets, *Journal of Food Engineering*, Vol. 76, p. 626-631. (ISI, Scopus, IF = 2.276)
  90. M. Khalid, **S. Ali**, L.C. Abdullah, C.T. Ratnam and S.Y. Thomas Choong (2006). Effect of MAPP as Coupling Agent on the Mechanical Properties of Palm Fiber Fruit Bunch and Cellulose Polypropylene Biocomposites. *International Journal of Engineering and Technology*, Vol. 3, No. 1, pp. 79-84. (ProQuest, GoogleScholar)
  91. Arthur A. Garforth, **Salmiaton Ali**, Jesús Hernández-Martínez and Aaron Akah (2004), Feedstock Recycling of Polymer Wastes, *Current Opinion in Solid State & Materials Science*, Vol. 8, Issue 6, December 2004, p. 419-425. (Scopus, IF = 5.438)
  92. **Salmiaton Ali**, Arthur A. Garforth (2004). Polymer Waste Recycling over Fresh, Steam Deactivated and Used FCC Catalysts, *IEM Journal (the Journal of the Institution of Engineers, Malaysia)*, Vol. 65, No. 3/4, September/December 2004, 24 – 27 (ISSN: 0126-513X). (refereed)
  93. **Ali, S.**; Garforth, A.A.; Harris, D.H.; Rawlence, D.J.; Uemichi, Y (2002). Polymer Waste Recycling over 'Used' Catalysts. *Catalysis Today*, 2002, Vol.75, 247-255. (ISI, Scopus, IF = 2.980)
- 

### Proceedings

1. O. Qistina, **A. Salmiaton**, T.S.Y. Choong, Y.H. Taufiq-Yap, S. Izhar (2023). Characterization of carbon nanotubes coated monolith synthesized via direct liquid injection of chemical vapor deposition. 2<sup>nd</sup> International Conference on Innovation in Chemical Engineering and Technology (ICICET2023), TNCPI Universiti Putra Malaysia, 4-5 September 2023.
  2. N.H. Mohd Zahari, N.A. Jamaluddin, **A. Salmiaton**, S. Sobri, N.A. Mohd Nasir, N.I. Shafizah (2023). Microstructure properties of concrete incorporated with rubber sludge as filler. 2<sup>nd</sup> International Conference on Innovation in Chemical Engineering and Technology (ICICET2023), TNCPI Universiti Putra Malaysia, 4-5 September 2023.
  3. S. Sinurat, R.S.R.M. Hafriz, N.S. Habib, **A. Salmiaton**, S. Izhar, M.R.Abdul Hamid, S. Sobri (2023). Preparation of bimetallic catalyst to refining waste tire pyrolysis oil via hydrogenation. 2<sup>nd</sup> International Conference on Innovation in Chemical Engineering and Technology (ICICET2023), TNCPI Universiti Putra Malaysia, 4-5 September 2023.
  4. K.Y. Koh, **A. Salmiaton**, H. Hizam, M.I. Aida Isma (2021). Fabrication of Low Dielectric Chicken Feather-Epoxidized Palm Oil Composite for Semiconductor Application. 7<sup>th</sup> International Conference on Green Design and Manufacture 2021 (IConGDM 2021), Universiti Malaysia Perlis, Malaysia, 8-9 September 2021.
  5. R. Alshayer, **A. Salmiaton**, T. Mohammad, A. Idris, C.F. Ishak (2019). The Plant Uptake and Translocation Ability of High Concentrations of Polycyclic Aromatic Hydrocarbons in Constructed Wetland. 7<sup>th</sup> International Symposium on Applied Engineering and Sciences (SAES2019), Universiti Putra Malaysia, Malaysia, 11-12 November 2019.
  6. O. Qistina, **A. Salmiaton**, T.S.Y. Choong, S. Izhar, Y.H. Taufiq-Yap (2018). Effect of CVD Preparation Techniques for CNTs Growth on Monolith. 31<sup>st</sup> Symposium of Malaysian Chemical Engineers (SOMChE2018). Istana Hotel, Kuala Lumpur, 5-6 Dec 2018
  7. R. Alshayer, **A. Salmiaton**, T. Mohammad, A. Idris, C.F. Ishak (2018). Growth Characteristics of P. Karka and V. Zizaniodes in the Presence of High Concentrations of Toxic Polycyclic Aromatic Hydrocarbons. 31<sup>st</sup> Symposium of Malaysian Chemical Engineers (SOMChE2018). Istana Hotel, Kuala Lumpur, 5-6 Dec 2018.
-

- 
8. R.M.H. Raja Shahrizzaman, **A. Salmiaton**, R. Yunus, Y.H. Taufiq-Yap (2018). Modified Local Carbonate Mineral as Deoxygenated Catalyst for Biofuel Production via Catalytic Pyrolysis of Waste Cooking Oil. 4<sup>th</sup> International Conference on Green Design and Manufacture 2018 (IConGDM2018), Ho Chi Minh City, Vietnam, 29-30 April 2018.
  9. R.S.R.M. Hafriz, **A. Salmiaton**, R. Yunus, Y.H. Taufiq-Yap, I. Nor Shafizah (2018). Effect of Ni/Malaysian Dolomite Catalyst Synthesis Technique on Deoxygenation Reaction Activity of Waste Cooking Oil. International Conference on Catalysis 2018 (iCAT2018), Bangi-Putrajaya Hotel, Selangor, 13-15 November 2018.
  10. A.B. Makama, **A. Salmiaton**, E.B. Saion, T.S.Y. Choong and N. Abdullah (2015). Microwave-Assisted Synthesis of Porous ZnO/SnS Heterojunction and its Application in Visible-Light Degradation of Ciprofloxacin. International Conference on Nano-Electronic Technology Devices and Materials 2015 (IC-NET 2015), UiTM Shah Alam, Selangor, 27 February -2 March 2015.
  11. A.B. Makama, **A. Salmiaton**, E.B. Saion, T.S.Y. Choong and N. Abdullah (2014). Effects of CdS Particle Size on the Photocatalytic AReduction of Aqueous Cr(VI). World Research and Innovation Convention on Engineering and Technology (WRICET 2014), Marriott Hotel Putrajaya, 25-26 November 2014.
  12. M. Aminian, M. Zainal Abidin Ab Kadir, **A. Salmiaton**, Wan Fatinhamamah, Taufiq Ishak and M. Izadi (2013). Correlation of Furfural and Moisture Content with Age of Transformers. 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), Langkawi, Malaysia. 3-4 June, 2013.
  13. Mei Yi Liew, **A. Salmiaton** and W.A.K.G. Wan Azlina (2012). Catalytic Pyrolysis of Waste Chicken Fats using Zeolite Catalysts. 4<sup>th</sup> International Conference on Chemical and Bioprocess Engineering (ICCBPE2012) in conjunction with 26th Symposium of Malaysian Chemical Engineers (SoMChE2012), 21-23 November 2012, Kota Kinabalu, Sabah.
  14. M.A.A. Mohammed, **A. Salmiaton**, W.A.K.G. Wan Azlina and M.S. Mohammad Amran (2009). Gasification of Empty Fruit Bunch for Hydrogen Rich Fuel Gas Production. 23rd Symposium of Malaysian Chemical Engineers (SOMChE-2009) in conjunction with 3<sup>rd</sup> International Conference on Chemical and Bioprocess Engineering (ICCBPE 2009), 12-14 August 2009, Kota Kinabalu, Sabah.
  15. Mohd. Taha K.S., **Salmiaton A.** and Shafreeza S. (2009). Concentration Profile Behavioral from Digestate Television Printed Circuit Board for Metal Recovery via Electrolysis. 23rd Symposium of Malaysian Chemical Engineers (SOMChE-2009) in conjunction with 3rd International Conference on Chemical and Bioprocess Engineering (ICCBPE 2009), 12-14 August 2009, Kota Kinabalu, Sabah.
  16. **Salmiaton A.**, Hao, Y.J., Zhu, L.M. Blending Process of Recycled EPDM and EVA at Various Ratios. Proceeding of Symposium on Engineering & Technology '08 (SET 2008), Hilton Hotel, Kuching, Sarawak, 15-16 December 2008.
  17. Mohd. Taha K.S., **Salmiaton A.** Optimum Acid Digestion Method for Metal Recovery from E-Waste. Proceedings of 22nd Symposium of Malaysian Chemical Engineers (SOMChE) in conjunction with 15<sup>th</sup> Regional Symposium on Chemical Engineering (RSCE), Impiana KLCC Hotel & Spa, Kuala Lumpur, 2-3 December 2008.
  18. Khalid M., **Salmiaton A.**, Ratnam C.T., Luqman C.A. Effect of Trimethylolpropane Triacrylate (TMPTA) on the Mechanical Properties of Palm Fiber Empty Fruit Bunch and Cellulose Fiber Biocomposite. Proceedings of 21st Symposium of Malaysian Chemical Engineers (SOMCHE 2007), Faculty of Engineering, Universiti Putra Malaysia, 12-14 December 2007.
  19. A.R. Roshanida, H.F.A. Barghash, **A. Salmiaton**, A. Norhafizah, A. Fakhru'l-Razi. Continuous Liquid State Bioconversion (LSB) Process of Sewage Treatment Plant (STP) Sludge. Proceedings of 21<sup>st</sup> Symposium of Malaysian Chemical Engineers (SOMCHE 2007), Faculty of Engineering, Universiti Putra Malaysia, 12-14 December 2007.
  20. A. Amnorzahira, A. **Salmiaton, A.** Luqman Chuah, Mohd. Rashid M.Y. Investigation on Relationship between Air Pollutant-Air Pollutant and Air Pollutant-Meteorological Parameters in Petaling Jaya in
-

2005. Proceedings of 21st Symposium of Malaysian Chemical Engineers (SOMCHE 2007), Faculty of Engineering, Universiti Putra Malaysia, 12-14 December 2007.
21. Noorshamsiana Abdul Wahab, Mohamad Sulong, Abd. Gapor Md. Top, **Salmiaton Ali**, Norhafizah Abdullah, Siti Mazlina Mustapa Kamal. Optimization of Enzyme-Assisted Oil Extraction of Palm Pressed Fibre. Proceeding of Chemistry and Technology Conference, Palm Oil Congress (PIPOC 2007), Kuala Lumpur Convention Centre, 26-30 August 2007.
  22. **Salmiaton Ali**. Energy recovery from plastic wastes. 3rd World Engineering Congress (WEC 2007), Evergreen Hotel, Penang, Malaysia, August 5 -9, 2007.
  23. MMH Khan, **S Ali**, A Fakhru'l-Razi, MZ Alam. Cellulase production using potential fungi by solid state bioconversion on rice straw. International Conference on Biotechnology Engineering (ICBioE'07), Prince and Resident Hotel, Kuala Lumpur, Malaysia, May 8-10, 2007.
  24. Khalid M., **Salmiaton A.**, Chuah T. G., Ratnam C. T and Thomas S.Y. C. Effect of MAPP as coupling agent on the mechanical properties of oil palm empty fruit bunch and cellulose Polypropylene biocomposites. Seminar on Engineering and Technology (SET 2006). Putrajaya, Malaysia, 4-5 September 2006.
  25. M.M.H Khan, **A. Salmiaton**, A. Fakhru'l-Razi, M.Z. Alam. Production Of Cellulase Enzyme By Solid State Bioconversion On Rice Husks Using Trichoderma Species. Seminar on Engineering and Technology, 4-5 September 2006, Palm Garden IOI Putrajaya.
  26. M. Khalid, T. G. Chuah, A. Salmiaton, C. T. Ratnam, S. Falak, and Thomas. S.Y. Choong. Effect of cellulose loading on mechanical properties of polypropylene composites. Asian Pacific Confederation of Chemical Engineering (APCChE 2006), Kuala Lumpur Convention Center, Malaysia, 27th - 30th August 2006.
  27. **Salmiaton Ali**; Mohammad Abdullah. Aluminum Recovery E-Waste. Proceedings of the Symposium of Malaysian Chemical Engineers (SOMChE 2005) in conjunction with 2nd International Conference on Chemical and Bioprocess Engineering”, 8 - 10 December 2005, Kota Kinabalu, Sabah, Malaysia.
  28. Khalid. M.; Ratnam. C. T.; **Salmiaton. A.**; Chuah. T. G.; Thomas C. S. Y. Polypropylene Composites Reinforced with Palm Oil Empty Fruit Bunch Cellulose in Packaging Application. Proceedings of the Symposium of Malaysian Chemical Engineers (SOMChE 2005) in conjunction with 2nd International Conference on Chemical and Bioprocess Engineering”, 8 - 10 December 2005, Kota Kinabalu, Sabah, Malaysia.
  29. **Ali, S.**; Garforth, A.A.; Cresswell, D.L.; Harris, D.H.; Rawlence, D.J. Waste Catalysts for Waste Polymers. Proceedings of the Crystal Faraday Conference: “Alternative and Renewable Feedstocks”, 13 November 2003, Coton House, Rugby, United Kingdom.
  30. **Ali, S.**; Garforth, A.A. Polymer Waste Recycling over Fresh, Steam Deactivated and Used FCC Catalysts. Proceedings of the 2<sup>nd</sup> International Symposium on Feedstock Recycling of Plastics and other Innovative Plastic Recycling Techniques (ISFR), 8 – 11 September 2002, Ostend, Belgium.

### Past Research Projects

Project No	Project Title	Role	Year	Source of Fund	Status
FRGS/1/2020 /TK0/UPM/0 2/15	Evaluation of the Physicochemical Characteristics Concerning Strength and Durability Aspects of Binary Waste Aluminum Dross and Quarry Dust Reinforcement Concrete	Project Leader	2020-2023	FRGS	Completed

GP-IPB/2016/ 9515202	Methanation of CO <sub>2</sub> over Mesoporous Ni-Based Carbon Coated Monolith Catalyst	Project Leader	2016	Geran Putra (IPB)	Completed
GP-IPS/2016/ 9502900	Constructed Wetland for Removal of Hydrocarbon from Industrial Wastewater	Project Leader	2016	Geran Putra (IPS)	Completed
PSDT-GT/4 (UPM-15)	Waste Reduction of Fat, Oil and Grease from Medan Selera, Pasar Besar Melaka	Project Leader	2015	KPM	Completed
05-02-12- 2207RU	Development of a Reliable Model for Fluidized Bed Catalytic Gasification of Lignocellulosic Biomass	Project Leader	2012	RUGS	Completed
FRGS/1/11/T K/UPM/02/34	Hydrogen Sorption Mechanism, Thermodynamics and Kinetics using Modified Carbon Adsorbents	Project Leader	2011	FRGS	Completed
05-03-10 1036 RU	Conversion of Wastes Chicken Fats into Pyro-Oil via Low Temperature Pyrolysis	Project Leader	2010	RUGS	Completed
03-01-04- SF0544	Novel Pyrolysis Technology in Recovering Renewable Fuel and Precious Metal from E-Waste	Project Leader	2007	MOSTI	Completed
05/01/07/ 0210RU	Pyrolysis and Gasification Processes for Hydrogen Production	Project Leader	2007	UPM	Completed
03/01/07/005 0RU	Synthesis of Cellulose from Empty Fruit Bunch Fibres: A Potential Reinforcement for Biocomposite Application	Project Leader	2007	UPM	Completed
02-01-07-052 FR	Kinetic Modeling of Mixed Plastic Waste Pyrolysis using Spent Catalyst	Project Leader	2006	FRGS	Completed
09-02-04-0321- EA001	Design and Development of Novel Heat Penetration Technique for Sterilization Process in Palm Oil Mills	Project Leader	2005	IRPA	Completed
<b>Professional Services/Consultation Work/ Contract Work/ Community Work</b>					
<b>Year</b>	<b>Project Title</b>	<b>Role</b>	<b>Authority</b>	<b>Amount</b>	
2024	Green Diesel Technology Upgrading: Optimized Bimetal	Collaborator	UNITEN	-	

---

	Dolomite Catalyst for Green Diesel Production Using Catalytic Deoxygenation of Non-Edible/Waste Oil			
2024	Innovations Circular Economy Product: Solid, Liquid and Gas Fuel Production Via Carbonization of Blended Biomass Using Modified Waste-Based Catalyst	Collaborator	UNITEN	-
2022-2023	Green Construction Pavement Block from Aluminum Dross	Head	Cenviro Sdn. Bhd.	RM20,000
2020-2022	E-Waste Management in Malaysia	Member	UPM/ DOE	CSR
2020-2021	Preparation and Characterization of Zeolite Catalysts in Producing Bio-Aviation Fuel from Edible/ Non-Edible Oil via Hydrothermal Liquefaction (HTL) Process	Head	UNITEN	RM20,000
2019	Walk the Talk on Climate Change	Member	Environmental Resource Management	Pembangunan Modal Ihsan (CSR)
2018-2020	Testing and Synthesizing of Soy Bean Oil for the Purpose of Use in Drilling Activities	Member	SCOMI SOSMA	RM113,000
2017	Kajian Pencemaran Air daripada Premis Makanan, Bengkel & Pusat Basuhan Air Kenderaan Di Kawasan Pihak Berkuasa Tempatan Di Bawah Projek "River of Life" – [Premis Makanan]	Head	KPKT	RM23,320
2016-2017	Development of PV Integrated Water Desalination System	Member	F Cubed	RM100,000
2015	Rubber-Scrap RDF	Head	Malaysian Rubber Board	RM13,000
2014-2021	Projek Pemasangan Air Pancutan antara AS Engineering dan Fakulti Kejuruteraan UPM	Member	A.S. Engineering Sdn. Bhd.	RM270,000
2010-2014	Fertilizer Research and Development Programme	Member	PETRONAS	RM20,000
2008-2009	Kajian Tadahan Pembentungan Bagi Upper Langat, Selangor	Member	Pakar Management Sdn. Bhd.	RM25,000

---

### Honours and Awards

<b>Name of Awards</b>	<b>Title</b>	<b>Award Authority</b>	<b>Award Type</b>	<b>Year</b>
Academic Awards	Renewable Fuel Production from Agricultural Waste via Gasification Method	UPM	Gold Medal	2008
Academic Awards	Gasification of Agrowaste to Produce Biofuel	UPM	Silver Medal	2007
Academic Awards	Cellulose Based Novel Biocomposite	ITEX	Silver Medal	2006
Awards of Merit	AnugerahPerkhidmatan Cemerlang		UPM	2004-2023

### Language Proficiency

- English (Excellent, 5/5)
- Malay (Excellent, 5/5)

**End of Document**