

## CURRICULUM VITAE



Assoc. Prof. Dr. Salmiaton Ali  
 Jabatan Kejuruteraan Kimia dan Alam Sekitar, Fakulti Kejuruteraan,  
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### Education

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

### Areas of Interest

1. Chemical and environmental engineering
2. Solid waste recycling, minimization and recovery
3. Catalytic gasification and pyrolysis
4. Fuel and energy recovery from waste
5. Waste-to-wealth

### Professional Qualification/ Membership/ Affiliation

1. Associate Member, Institute of Chemical Engineers (IChemE)
2. Individual Member, International Solid Waste Association (ISWA)
3. Member, Board of Engineers Malaysia (BEM)

### Appointments

Position	Duration
1. Research Coordinator, Department of Chemical and Environmental Engineering, Faculty of Engineering, UPM	January 2012 - to date
2. Master of Environmental Technology Management Program Coordinator, Faculty of Engineering, UPM	April 2005 – to date
3. Academic Coordinator, Department of Chemical and Environmental Engineering, Faculty of Engineering, UPM	January 2005 – December 2008

### Publications

#### Journals (30 recent journals)

1. 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).
2. 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).
3. 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).
4. 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).
5. 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).
6. 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)
  7. 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)
  8. 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)
  9. **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)
  10. 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)
  11. 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)
  12. Muhammad Tariq Bashir, **Salmiaton Binti 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)
  13. 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)
  14. 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)
  15. M. Aminian, M. Zainal Abidin Ab Kadir, **A. Salmiaton**, Wan Fatinhamamah, Taufiq Ishak and M. Izadi (2013). Correlation of FULfural and Moisture Content with Age of Transformers. *IEEE 7<sup>th</sup> International Power Engineering and Optimization Conference Proceedings (PEOCO2013)*, 366-368. (Scopus)
  16. 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)
  17. Elnashaie, W.A.K.Wan Azlina, M.S. Mohm. 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)
  18. A. A. Syariffuddeen, 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)
  19. 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)
  20. 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)
  21. 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)
  22. 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)
  23. 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)

24. 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)
25. **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)
26. 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)
27. 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)
28. 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)
29. 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)
30. 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)
31. **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)
32. 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)
33. **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)
34. 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)
35. 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)
36. 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)
37. 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)
38. 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)
39. **A. Salmiaton**, A. Garforth (2007). Waste Catalysts for Waste Polymer. *Waste Management*, vol. 27, pp. 1891-1896. (Scopus, IF = 2.485)
40. 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)
41. **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)
42. 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)

43. 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)
44. 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)
45. **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)
46. **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)

#### Conference Proceedings (30 recent Conference Proceedings)

1. 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.
2. 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 26<sup>th</sup> Symposium of Malaysian Chemical Engineers (SoMChE2012), 21-23 November 2012, Kota Kinabalu, Sabah.
3. 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. 23<sup>rd</sup> 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.
4. Mohd. Taha K.S., Salmiaton A. and Shafreeza S. (2009). Concentration Profile Behavioral from Digestate Television Printed Circuit Board for Metal Recovery via Electrolysis. 23<sup>rd</sup> 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.
5. 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.
6. 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 15th Regional Symposium on Chemical Engineering (RSCE), Impiana KLCC Hotel & Spa, Kuala Lumpur, 2-3 December 2008
7. 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.
8. 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 21st Symposium of Malaysian Chemical Engineers (SOMCHE 2007), Faculty of Engineering, Universiti Putra Malaysia, 12-14 December 2007.
9. 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.
10. 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.
11. Salmiaton Ali. Energy recovery from plastic wastes. 3rd World Engineering Congress (WEC 2007), Evergreen Hotel, Penang, Malaysia, August 5 -9, 2007.
12. 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.

13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. Ali, S.; Garforth, A.A. Polymer Waste Recycling over Fresh, Steam Deactivated and Used FCC Catalysts. Proceedings of the 2nd International Symposium on Feedstock Recycling of Plastics and other Innovative Plastic Recycling Techniques (ISFR), 8 - 11 September 2002, Ostend, Belgium.

#### Books (If any)

#### Chapter in Books (If any)

1. **A. Salmiaton** and F. Danafar. Degradable Polyurethane Material from Polyethylene Terephthalate (PET) Waste for Potential Coating Material: Is it a Suitable Matrix for Composites? In: M.S. Salit, E.S. Zainudin, Z. Leman, D. L. Abang Abdul majod and D.R. Awang Biak, eds. Engineering Composites: Properties and Applications, Serdang: Universiti Putra Malaysia Press, 2014, 460-482
2. M. Y. Liew, **A. Salmiaton**, W. A. K. G. Wan Azlina and R. Yunus (2013). Catalytic Pyrolysis of Waste Chicken Fats Using Zeolite Catalysts. In: R. Pogaku, A. Bono and C. Chu, eds. Developments in Sustainable Chemical and Bioprocess Technology, New York: Springer, 2013, pp. 73-80.
3. **S. Ali**, A.A. Garforth, D.H. Harris and R.A. Shigeshi, (2003). Polymer Waste Recycling over 'Used' Catalysts. In: M.A. Keane, ed. Surfactant Science Series: Interfacial Applications in Environmental Engineering, Vol. 108, New York: Marcel Dekker Inc., 2003, pp. 295–328.

#### Research Grants

No	Project Title	Amount (RM)	Year	Source of Fund
1.	Waste Reduction of Fat, Oil and Grease from Medan Selera, Pasar Besar Melaka	296,225	2015-2017	KTP-KPM
2.	Development of a Reliable Model for Fluidized Bed Catalytic Gasification of Lignocellulosic Biomass	102,000	2012-2014	RUGS
4.	Hydrogen Sorption Mechanism, Thermodynamics and Kinetics using Modified Carbon Adsorbents	109,000	2011-2014	FRGS
5.	Pyrolysis of Waste Chicken Fat by Using Zeolite Catalysts	12,000	2011 – 2013	RUGS
6.	Conversion of Wastes Chicken Fats into Pyro-Oil via Low Temperature Pyrolysis	100,000	2010-2013	RUGS
7.	Pyrolysis and Gasification Processes for Hydrogen Production	80,000	2007-2009	RUGS

8.	Synthesis of Cellulose from Empty Fruit Bunch Fibres: A Potential Reinforcement for Biocomposite Application	73,000	2007-2009	RUGS
9.	Novel Pyrolysis Technology in Recovering Renewable Fuel and Precious Metal from E-Waste	172,800	2007-2009	Science Fund
10.	Kinetic Modelling of Mixed Plastic Waste Pyrolysis using Spent Catalysts	15,000	2006-2007	FRGS
11.	Design and Development of Novel Heat Penetration Technique for Sterilization Process in Palm Oil Mills	199,000	2002 – 2006	IRPA RM-8

### Awards/Recognition (Current)

Num	Name of awards	Title	Award Authority	Award Type	Year
1.	Gold Medal	Renewable Fuel Production from Agricultural Waste via Gasification Method	Pameran Rekacipta, Produk dan Inovasi (PRPI), UPM	Internal	2008
2.	Silver Medal	Gasification of Agrowaste to Produce Biofuel	Pameran Rekacipta, Produk dan Inovasi (PRPI), UPM	Internal	2007
3.	Silver Medal	Cellulose Based Novel Biocomposite	ITEX, KLCC	International	2007

### Professional Services/Consultation

No	Year	Title	Authority	Amount
1.	2010-2014	Fertilizer Research and Development Programme	Petroliam Nasional Berhad	RM20,000
2.	2008-2009	Kajian Tadahan Pembentungan Bagi Upper Langat , Selangor	Pakar Managemet Sdn. Bhd.	RM25,000

### Student Supervision

#### PhD (Main Supervisor)

No.	Name	Title	Status
1.	Mohammed M. Ahmad (GS20169)	Catalytic Gasification of Empty Fruit Bunch for Tar-Free Hydrogen Rich-Gas Production	Graduated
2.	Makama Abdullahi Baba (GS28676)	Photocatalytic Water Splitting Using Core/Shell Semiconductor Nano-Crystals	Submitted
3.	Ahmed Abdulmajeed Mohammed Al-Ogaidi (GS31497)	Biomass Gasification Modeling And Simulation	Ongoing
4.	Muhammad Tariq Bashir (GS32214)	Integrated Chemical Removal Of Nitrate And Fluoride In Drinking Water Sources	Ongoing
5.	Raja Mohamad Hafriz B. Raja Shahruzzaman (GS33028)	Modified Dolomite Based Catalyst For Bio-Aviation Fuel Production Via Catalytic Pyrolysis Of Waste Cooking Oil	Ongoing

## Student Supervision

### PhD (Main Supervisor)

No.	Name	Title	Status
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### MS with thesis (Main Supervisor)

No.	Name	Title	Status
1.	Mohd Khalid (GS15042)	Performance and Properties of Polypropylene-Cellulose and Polypropylene-Oil Palm Empty Fruit Bunch Biocomposites	Graduated
2.	Md. Munir Hayet Khan	Solid State Fermentation of Rice Straw for Production of Cellulases by Selected Fungi	Graduated
3.	Amnorzahira Amir	Air Pollution Trends in Petaling Jaya, Selangor, Malaysia	Graduated
4.	Noorshamsiana Abdul Wahab (GS 16413)	Enzyme-Assisted Oil Aqueous Extraction from Palm-Pressed Fibre	Graduated
5.	Goh Hui Wen (GS24871)	Polyethylene Terephthalate (PET) Waste Glycolysis Product Purification by Two Stages Evaporation Processes	Graduated
6.	Liew Mei Yi (GS30960)	Catalytic Pyrolysis Of Waste Chicken Fats Using Zeolite Catalysts	Ongoing
7.	Faten Hameed Kamil (GS37250)	Industrial Solid Waste for Potential Catalyst	Ongoing
8.	Noorfatihah Mura (GS41323)	Recovery Valuable Material from Industrial Solid Waste	Ongoing

### MS without Thesis (Main Supervisor)

No.	Name	Title	Status
1.	Ahmad Kamaruldin Sahwal bin Mat Akir (2007/2008)	Removal of Ammonia in Sewage Treatment Plant Effluent by using Biocatalyst	Graduated
2.	Nor Aisyah Mat Yahya (2007/2008)	Wastewater Treatment using Titanium Dioxide Photocatalytic Oxidation	Graduated
3.	Lim Yee Chern (2009/2010)	Feasibility Study of Oil Mill Effluent (POME) Treatment for Renewable Energy under Clean Development Mechanism (CDM) Perspective	Graduated
4.	Nurbaiti Ab Khalid (2009/2010)	Microwave Assisted Extraction of Metals from E-Waste	Graduated
5.	Juliana binti Abd Jalil (2009/2010)	A Study on Wastewater Flow Characteristics into Bandar Tun Razak Sewage Treatment Plant, Kuala Lumpur	Graduated
6.	Ng Sheng Liang (2009/2010)	Ability of Sweet Potato on Removing Suspended Solid in Water Treatment	Graduated
7.	Hanizah binti Ariffin (2009/2010)	Performance of Aspergillus Flavus as Biocoagulant in Palm Oil Mill Effluent Wastewater Treatment	Graduated
8.	Nurul Nadia binti Shamsuddin (2010/2011)	Moringa Oleifera as a Potential Natural Coagulant for Jeram Sanitary Landfill Leachate	Graduated
9.	Menaka a/p Harikarisin (2010/2011)	The Effectiveness of the Engineering Control Equipment in Controlling Exposure of Chemicals Hazardous to Health in Electroplating Industry	Graduated
10.	Koo Zao Cheong (2011/2012)	The Effect of Municipal Water Aesthetic Perception on the Consumption of Bottled Water	Graduated
11.	Olisa Emmanuel (2011/2012)	Pyrolysis of Empty Fruit Bunch for Enhanced Production of Hydrogen Gas	Graduated

No.	Name	Title	Status
11.	Azril bin Mohamad Aziz (2012/2013)	Optimization of PEG Matrix to Reduce Ammoniacal Nitrogen Concentration in Pilot Scale Bioreactor at Sewage Treatment Plant	Graduated
12.	Munirah binti Rahmat (2012/2013)	Solidification of the Oil Base Mud Waste Steam Stripping Unit Treatment Residue	Graduated
13.	Siti Norain binti Mohd Nor (2012/2013)	The Evaluation of Solid Waste Management and Practices in Atfal Kids Kindergarten	Graduated
14.	Rusul Khaleel Ibrahim (2012/2013)	Comparison between Nitrate Removal Efficiency from Synthetic Wastewater using Chicken Bones and Eggshells	Graduated
15.	Tan Shu Woei (2012/2013)	Application of Waste Chicken Eggshell as Solid Catalyst for Bio-Oil Extraction from Waste Cooking Oil	Graduated
16.	Mimi Malisa binti Dolhan (2013/2014)	An Investigation of Wastewater Management at Medan Niaga Satok, Kuching	Graduated
17.	Nur Lydia binti Othman (2013/2014)	Market Waste Assessment at Medan Niaga Satok, Kuching	Graduated
18.	Mohd Izwan bin Shaharuddin (2013/2014)	Synthesis and Characteristic of Treated and Untreated Pineapple Leaf Fiber (PALF) Reinforced by Polypropylene (PP) Composites	Graduated
19.	Shaifatulna'im binti Shamsuddin (2013/2014)	A Study of In-Vessel Composting System	Ongoing
20.	Mus'ab bin Zainal (2014/2015)	Effect of Pyrolysis Temperature and Heating Time on Biochar Yield from Aquatic Plant Biomass	Graduated
21.	Farah Syuhada binti Salleh (2014/2015)	Development of Biomass Briquette from Vegetable and Fruit Waste from Market	Graduated