

Curriculum Vitae
Robiah bt. Yunus
BSc. MSc. PhD



1. FULL NAME

ROBIAH B. YUNUS

2. DEPARTMENT/FACULTY/AREA OF SPECIALISATION

Department of Chemical and Environmental Engineering/ Faculty of Engineering/
Chemical Engineering

3. DATE OF BIRTH/AGE

10 October 1964/ 47 years old

4. EDUCATION AND ACADEMIC QUALIFICATIONS

- 1982– 1986 University of Alabama, USA
- BSc in Chemical Engineering, 3.47/4.00
 - Top 5% of Class
- 1988 – 1989 University of Leeds, UK
- MSc in Integrated Design of Chemical Plant
- 1999 – 2003 Universiti Putra Malaysia, Malaysia
- PhD in Chemical Engineering

5. ACADEMIC POSITIONS AND RELATED

Universiti Putra Malaysia

- May 2012 – todate ■ Director
Institute for Advanced Technology
- May 2011 – April
2012 ■ Deputy Director
Institute for Advanced Technology
- Sep 2009 – April
2011 ■ Deputy Dean (Research and Postgraduate Studies)
Faculty of Engineering
- Jan – March 2011 ■ Acting Dean
Faculty of Engineering
- Jan 2004 – Dec ■ Head of Department

- 2008 Dept of Chemical and Environmental Engineering
- 1997 – 2004 ■ Head of Process Engineering Unit
- Universiti Teknologi Malaysia**
- 1995 – 1997 *Senior Lecturer in Chemical Engineering*
 ■ Member of Faculty's Board
- 1989 – 1995 *Lecturer in Chemical Engineering*
 ■ Head of Process Simulation Lab
- 1986 – 1988 ■ Assistant Lecturer in Chemical Engineering

6. TEACHING EXPERIENCES

- Undergraduate Lecture courses on*
- Process Control and Instrumentation (3 credit hours)
 - Process and Plant Design (4 credit hours)
 - Chemical Process Principles (3 credit hours)
 - Chemical Engineering Thermodynamics (3 credit hours)
 - Heat Transfer (4 credit hours)
 - Mass Transfer (4 credit hours)
 - Unit Operations (3 credit hours)

- Postgraduate Lecture courses on*
- Hazard Analysis and Risk Assessment (3 credit hours)
 - Design for Safe Handling of Industrial Chemicals (3 credit hours)
 - Environmental Engineering Principles (3 credit hours)
 - Toxic and Hazardous Waste Engineering (3 credit hours)

7. PROFICIENCY IN BAHASA/ ENGLISH

- Excellent commands in Bahasa and English

8. MANAGEMENT AND ADMINISTRATION

- At UPM*
1. **Director, Institute for Advanced Technology (ITMA)**
 - *(May 2012 to date)*

Managing all research activities at the Institute for Advanced Technology (ITMA) focusing on Advanced Materials and nanotechnology. Currently there are more than 90 postgraduate students registered under various programs offered by the 3 laboratories with more than RM10 millions of research grants annully. There are more than 15 million worth of high-end research facilities at the institute including FESEM, XRD, RAMAN, nanoparticles sizer, BET, GC, HPLC, FTIR etc.

2. Deputy Director, Institute for Advanced Technology

■ *(May 2011 to April 2012)*

Assisting the Director in managing all research activities at the Institute for Advanced Technology (ITMA). Currently there are more than 160 postgraduate students registered under various programs offered by the 4 laboratories with more than RM5 millions of research grants. There are more than 15 million worth of high-end research facilities at the institute including FESEM, nanoparticles sizer, filament winding machine, UTM machine etc.

3. Deputy Dean, Research and Postgraduate Studies.

■ *(September 2009 to April 2011)*

Assisting the Dean of Engineering in managing all activities pertaining to research and postgraduate studies at the Faculty of Engineering, UPM. Currently there are more than 1300 postgraduate students registered under various programs with thesis or without thesis offered by the 8 departments of the faculty. The total grant received by the faculty for RMK9 was among the highest at UPM at about RM42 million.

4. Head of Department, Chemical and Environmental Engineering

■ *(January 2004 to December 2008)*

Administer the academic and financial matters, plan and implement infrastructure and staff development. Plan, develop and review curriculum for teaching at UG and PG levels

Managed budgets:

Total cost center income RM 3 M

Departmental research income RM 12 M

Created a management structure comprising the Head, two Coordinators and 4 Heads of units who together with two department administrative staff comprise the Department Executive. The key portfolios on the Executive are, Coordinator of Academics and Coordinator of Research and Post Graduate Studies

Helped the department to acquire the University and Government funding in excess RM 2.7 M for substantial renovation and re-equipping of old laboratories, creating new laboratory, Materials Engineering Laboratory.

At UPM

Led the department to obtain accreditation for the BEng program from Engineering Accreditation Council Malaysia for period of 2000 – 2005, 2005 – 2008, 2008-2010.

Led the department to obtain accreditation for the BEng program from Institution of Chemical Engineers, UK for up to 2008 intakes.

Completed curriculum revision for the BEng program for period of 2006 – 2010

Started a new MSc taught course program, MSc Process Safety and Loss Prevention.

Previous Administrations At Universiti Teknologi Malaysia

- As Member of Faculty Board - responsible for policy matters of the Faculty of Chemical and Natural Resources Engineering, and planning for the faculty's activities.
- As Head of Process Design Laboratory - responsible for planning and developing the lab for academic, research and consultancy purposes in the area of computer aided process design and simulation, including hardware and software purchases.

9. RESEARCH ACTIVITIES (TOTAL: RM15.550 MILLION)

No	Project Title	Role	Year	Source of fund
1	Enhancing Productivity and Sustainability of Palm Oil Milling Industry	Program leader	2012-2017	LRGS RM5,855,000
2	Investigation Of Rheological Behaviour of Nanographene-Modified Drilling Fluid From Bio-Based Synthetic Esters	Project leader	2013-2015	FRGS RM137,000
3	Development of Advanced Coating Technology for Controlled Release Fertilizer	Project leader	2011-2013	PETRONAS RM 695,520
4	Development of continuous pulsed loop reactor for Synthesis of ester-based biodegradable fluid	Project leader	2011-2013	ERGS 145,000
5	Optimization of Particle Size of nano-encapsulated drug by controlling process parameters using SAS parameters	Project leader	2011-2013	RUGS RM151,000
6	Study on mechanism of two-stage acid hydrolysis of oil palm empty fruit bunch (OPEFB) fiber	Project leader	2010-2012	FRGS RM49,540
7	Integrated Production of Environmental Friendly Biodegradable Lubricants from Vegetable Oils, Technofund	Project leader	2007-2010	Technofund, RM4,555,000
8	Synthesis of Biodegradable Epichlorohydrin from Glycerol (Biodiesel Byproduct).	Project leader	2007-2009	E-Scienfund RM235,000
9	Mass Transfer Modeling of Nano Encapsulation of Linamarin Using Supercritical Carbon Dioxide (SCCO ₂)	Project leader	2007-2009	RUGS RM57,000
10	Kinetics Study on Transesterification of Jatropha Triglycerides for Biodiesel Production	Project leader	2007-2009	FRGS RM100,000
11	Formulation of Carbon-carbon Fibre Composite and Fibre Reinforced Plastics for Engineering Application	Project leader	2004 -2008	IRPA, RM2,755,600
12	Formulation of Natural Synthetic Lubricant for Hydraulic Fluids,	Project leader	2003 - 2004	IRPA RM112,000
13	Synthesis of High Performance Environmental Friendly Biodegradable Lubricants from	Project leader	2002 - 2004	IRPA RM249,000

	<i>Vegetable Oils,</i>			
14	<i>Modelling and Simulation of Chemical Process Plant for Optimum Productivity</i>	Project leader	1987	<i>UPM Short Term Project, RM6738</i>
15	<i>Production of methyl ester from palm oil using immobilized lipase,</i>	Project leader	1988	<i>IRPA RM50,000</i>
	<i>Process Integration for Maximum Energy recovery in a Gas Processing Plant,</i>	Project leader	1988	<i>IRPA, RM200,000</i>
	<i>Research on Computer Aided Process Engineering (CAPE) under project Development of Physical Properties Data Bank.</i>	Project leader	1989	<i>IRPA RM195,000</i>
	TOTAL GRANT			<i>RM15,548,398</i>

10. SUPERVISION OF STUDENTS

Undergraduates

- Supervised more than 50 undergraduate students on various design and final year research projects.

Postgraduates

Completed *PhD (Main Supervisor)*

1. Chong, Gun Hean, Nano- Encapsulation of Linamarin in Supercritical CO₂ condition, PhD, 2009.
2. Azhari, Design of Novel Reactor for Transesterification of Jatropha Biodiesel, 2011
3. Ferra Naidir, Synthesis of Oxidatively Stable Biolubricant from Palm Oil, PhD, Main Supervisor, 2011
4. Shanti Faridah Salleh, Hydrolysis of Biomass for Bioethanol Production, 2012
5. Herliati, Synthesis of Biodegradable Dichlorohydine from Glycerol (Biodisel byproducts), 2013.
6. Nasrin Khodapaniah, Identification of Effective natural coagulant for Water Treatment Plant, waiting for viva.

PhD (Co-supervisor)

7. Saad Abbas, Effect of Thermal Softening on the Textural Properties of Palm Oil Fruitlets, PhD, 2008
8. Darmadi, Preparation of Furfuryl Alcohol Derived Activated Carbon Monolith For Liquid Adsorption, 2009
9. Rozita Omar, Pyrolysis of EFB Using Microwave technology, PhD, 2010.
10. Yeoh Chiou Moi, Production and Purification of Concentrated Diacylglycerol Oil, 2010.
9. Riza Wirawan, Thermo-Mechanical roperties of sugarcane bagasse-

- filled polyvinyl chloride (PVC) composites, 2011.
10. Muhamad, Adsorption of 3-Carotene onto Carbon Coated Monolith, 2011.
 11. Lim Voon Lei, Synthesis of Biodiesel using Heterogeneous Catalyst, 2008.
 12. Sara Yasina Yusof, Monitoring and Modeling Of Air Particulate Matter In Ambient Air Of Malaysia, 2008.
 13. Eltaher Elzarroug Aburkaba, Initial Investigation of the Use of Local Industrial wastes and Byproducts as Mineral Fillers in Stone mastic Asphalt Pavements, 2008.

Master (Main Supervisor)

14. Nor Saiful Hafiz Bin Abdul Habib, Production of ester based drilling fluid, 2013
15. Hassan Masood, Development of Heterogeneous Catalyst for biolubricant production, 2012.
16. Hamidah Abd Hamid, Dynamic Modeling and Simulation of Transesterification of Palm Methyl Ester and Trimethylolpropane, 2011.
17. Mahshid Kalani, Nano-Encapsulation of Drug Using Supercritical Carbon Dioxide In Supercritical Anti Solvent Method (SAS), 2011.
18. Anita Abu Bakar, Effect of Hydroxyl group on Oxidative Stability of Palm-based Lubricant, 2006.
19. Siti Zubaidah Sulaiman, Design of scale up production unit for palm oil- based biodegradable lubricant, 2006.
20. Azhari, Synthesis of Low Pour Point Palm-based Biodiesel, 2007
21. Fateme, Formulation of Carbon Fibre Reinforced Polyethylene for Automotive Parts, 2007.
22. Norhalaliza Alias, Formulation of Hydraulic Fluid Using Palm Oil-based Lubricant, 2007.
23. Sarina Sulaiman, Carbon Fiber Reinforced Carbon for Brake Pad Application, 2007.
24. Nor Hasni, Formulation of Carbon Fibre Reinforced Polyurethane for Automotive Parts, 2009.

Master (Co-supervisor)

24. Yoong See Kin, Extraction of Vitamin A, E and Phospholipids from Crude Palm Oil (CPO) Using Ion Chromatography, MSc, 1997-1999,
25. Tan Kah Yaw, Modelling of Transient Heat Transfer in a Thermal System, MSc, 1997-1999
26. Aloysius Raj, Characterization of Bleaching Earth for Bleaching Of Palm Oil, MSc, 1999-2001.
27. Umar Usman Abdullah, Evaluating the Potential of Palm Oil as a Liquid Dielectric Fluid in High Voltage Application, 2006.
28. Wedad Ali Ashour, Development and Evaluation of Linamarin Drug for Controlled Release Using Biodegradable PLGA Nanoparticles, 2005.
29. Min Min A., Application of Differential Scanning Calorimetry on Modified Polyethylene, 2006.
30. Majid Davoodi, Development of Fiber Reinforced Epoxy

- Composites Energy Absorber for Automotive Bumper, 2008.
31. Muhamad, Adsorption Kinetics, 2008.
 32. Sepidar Sayyar, Extraction of Oil from Jatropha Seeds- Optimization and Kinetics, 2009.
 33. Mahta Vishkei, Synthesis and Characterisation Of Carbon Nanotube On Short Carbon Fiber By Fluidized Bed Chemical Vapour Deposition (FBCVD) and Fabrication Of Carbon Nanotubes, 2009.
 34. Mohammad Golestan Bagh, Use of Moringa Oleifera Seed As A Natural Coagulant In Water Treatment, 2008
 35. Mohamad Faiz Mukhtar Bin Gunam Resul, Production of Biodiesel And Biolubricant Oil By Oscillatory Flow Mixing, 2007.
 36. Mohd Yusof bin Harun Production of Bioethanol From Water Hyacinth, 2008
 37. Odeigah Edith Anwunli, Chemical Additives As Cold Flow Improves For Palm Oil And Jatropha Oil Bio Diesel, 2008.
 38. Elham Motaleb, Batch Distillation Using Salt-Effect, 2009.
 39. Emiliana Rose Binti Jusoh @ Talib Polyethylene/Propylene Reinforced Crude Palm Oil, 2009.
 40. Mohamad Faiz Mukhtar Bin Gunam Resul, Production of Biodiesel And Biolubricant Oil By Oscillatory Flow Mixing, 2007.
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Ongoing PhD (Main Supervisor)

19. Chang Teck Sin, Development of Soap-free Synthesis of Biolubricant, 2008
20. Farahnaz Eghbali Babadi, Design of Coating Technology for Slow Release Fertilizer, 2011
21. Seyed Ali Zamani, 2010
22. Hamidah Abd Hamid, 2011
23. Zaini Yaacob, 2010
24. Lina Ismail Jassim, 2012
25. Ferial Ghaemi, 2012
26. Shiva Geshnizjani, 2012

PhD (Co-Supervisor)

27. Lamyah M.J. Mahdi, Fatigue and Rut Potential of Nano-based Asphalt Bider, 2010
28. Behnam Kheradmand, Effect of Moisture on SMA warm Mix Asphalt, 2010
29. Fath ElRahman Hamid ElHassan Hamid
30. Mahtab Samadi
31. Farhad Gharavi
32. Ahmad Salsabili
33. Farhad Ostovan
34. Nurhidayah Azeman

35. Soroush Soltani.

Master (Main Supervisor)

36. Khairul Ridhwan, Development of Coating Technology for Slow Release Fertilizer, 2009.
37. Umami Nor Husna, Two Stage Hydrolysis of Biomass for Bioethanol Production, 2010
38. Nurshamimi A. Rahman
39. Yayat Noerhidayat
40. Sohei; Nekoui
41. Nuratiqah Mohamad Aziz
42. Nurliyana Abdul Raof

Master (Co-Supervisor)

43. Wang Liang Hui Effect of nitrogen and calcium on the growth of *Jatropha curcas*, 2010.
44. Fadilla Hasanah Ahmad, Large Scale Dielectrophoretic Separation Microorganism using wire cloth from textile industry, 2010
45. Nasrin Abu Bakar
46. Mohd Fatah Ibrahim
47. Ivan Tan Choon Tah
48. Mohsen Safakar
49. Liew Mei Yi
50. Lim Bo Yuan

11. EXAMINER FOR POST GRADUATE THESIS/PROJECTS

<i>List of Thesis/Project Title</i>	<i>Year</i>
Internal Examiner	
1. PhD Thesis, <i>Mechanical and Thermal Properties of Pineapple Leaf Fibre (PALF) Reinforced High Impact Polystyrene (HIPS) Composites</i> , Januar Parlaungan Siregar, UPM.	2010
2. PhD Thesis, <i>PLGA Nanoparticles loaded with Casava Linamarin as biodegradable delivery system for controlled release and targeting of cancer cells</i> , Ahmed Sulaiman, UPM.	2010
3. PhD Thesis, <i>Kinetics, Performance and Optimisation of Sewage Treatment Plant Sludge by Liquid State Bioconversion Continuous Process</i> – Roshanida A. Rahman, UPM.	2009
4. PhD Thesis, <i>Optimization of Cocoa Butter Extraction from Cocoa Nibs using Supercritical Fluids</i> – Asep Edi Kusnadi, UPM.	2007
5. MSc. Thesis, <i>Production of Carbon Nanotubes Filled Polypropylene Composites & Characterization of Its Properties</i> – Jeeferie Abd Razak, UPM	2007

6. MSc. Thesis, <i>Synthesis and Characterization of the Carbon Nanotubes Produced in Floating Catalyst Chemical Vapor Deposition Method by Varying Additional Hydrogen Flow Rate into the System</i> – Raja Nor Izawati Raja Othman, UPM.	2007
7. PhD Thesis, <i>Experimental and Modelling Studies of Methane Gas Adsorption on Carbon Materials for ANG Applications</i> – Ma'an Fahmi Rashid Al Khatib, UPM.	2009
8. MSc. Thesis, <i>Mathematical Models for Prediction of Rheological Parameters of Pameo Juice</i> – Samaneh Keshani, UPM.	2008
9. MSc. Thesis, Norhidayah Suleiman, Squalene Recovery from Palm Oil fatty Acid Distillate Using SFE, Food Tech, UPM	2011
10. MSc. Thesis, Sharmeen Adnan, Impregnation of in-house synthesized carbon nanotubes in bacterial cellulose, FSTM, UPM	2011
11. PhD. Thesis, Mohammed M. Ahmad, Catalytic Gasification of EPFB for Hydrogen Rich Fuel Gas Production, FK, UPM	2011
12. MSc. Thesis, Hossein Bagheri, Extraction and Characterization of Piper Nigrum L. Essential Oil Using Supercritical CO ₂ and hydrodistillation extraction methods. FSTM, UPM	2012
External Examiner	2007
1. MSc. Thesis (Chemical Engineering), <i>Development of Energy Efficient Gas Processing Plant</i> – Nguyen Thi Qyunh Nga, UTP.	2007
2. MSc. Thesis (Process Integration), <i>Dissertation Site Integration of LNG Processes-Cold Recovery from Scrub Column Bottoms</i> – Vimal Gopinadhan, UTP.	2007
3. MSc. Thesis, <i>Solid State Fermentation of Palm Kernel Cake by Aspergillus Flavus UMS01 in Radial Flow Packed Bed</i> – Wong Yoke Phooi, UMS.	2009
4. MSc. Thesis, <i>Supercritical Ethanol Technology for the Production of Biodiesel from Palm Oil and Jatropa Oil</i> – Gui Meei Mei, USM.	2010
5. MSc Thesis, <i>Development of Ultrasonic Assisted Biodiesel Production Process from Palm Oil using Heterogeneous Catalysts</i> – Hamed Mootabadi, USM.	2010
6. MSc. Thesis, <i>Development of Oil Palm Fiber Filter Media Riched with Chitosan for Pretreatment of POME</i> – Asimi Ana Ahmad, UTM.	2011
7. Mod Shukri Mat Nor, Comparison of Microwave assisted hydrodistillation with conventional hydrodistillation in extraction of essential oil, UMP	2011
8. Joreen Lim Lay Kim, Production of Biodiesel via Transesterification of Plam Oil at Low Temperature, UMS	
Chairman for Viva Committee	
1. PhD Thesis, <i>Development of Polyurethane/Clay Nano Composites Based on Palm Oil</i>	

<i>Polyol</i> – Teuku Rihayat, UPM.	2008
2. MSc Thesis, <i>Characterization of Eutectic Mixtures of Fatty Acids as Phase Change Materials (PCM)</i> , Rozanna Dewi, UPM.	2005
3. MSc. Thesis, <i>Use of Oil Palm Empty Fruit Bunch for Lignophenol Production</i> – Sharifah Sopliah Syed Abdullah, UPM.	2008
4. MSc. Thesis, <i>Biodegradation of Empty Fruit Bunches in Liquid Fermentation Under Non-Axenic Conditions</i> – Nor Fadilah Abdul Halim, UPM.	2007
5. PhD Thesis, <i>Microbial Treatment of DWTP Sludge by LSB Process for Enhancement of Its Settleability and Dewaterability</i> – Hind. F. A. Barghash, UPM.	2008
6. MSc. Thesis, <i>Design and Analysis of Filament Wound Compressed Natural Gas (CNG) Carbon Fibre Reinforced Composite Tank</i> Nurul Zuhairah Mahmud Zuhudi.	2008
7. Noor Hadzuin Nik Hadzir, <i>Advanced Extraction Method of Eugenol from Piper Betle.l</i> .	2011
8. Fariba Mahdavi, <i>Intercalation of urea into clay nanolayers</i>	2012
9. Mohamad Ridzwan Ishak, <i>Propoerties Enhancement of Sugar Palm Fibre Reinforced Unsaturated Polyester composites via vacuum resin impregnation</i>	2012

12. PUBLICATIONS

- Journals: 66 published & 8 submitted and under review, 48 in citation indexed journals with a cumulative impact factor of more than 56.
- 1 book, 1 conference proceeding and 1 chapter
- Conference/ proceedings more than 100

<i>List of Journal Publications</i>	Impact factor
1. Azhari M Syam, Hamidah A Hamid, Robiah Yunus, Umer Rashid, <i>Dynamic Modeling of Reversible Methanolysis of Jatropha curcas Oil to Biodiesel. The ScientificWorld J. (2013):268385.</i>	1.73
2. NWM Zulkifli, MA Kalam, HH Masjuki, KAH Al Mahmud, R Yunus <i>The effect of palm oil trimethylolpropane ester on extreme pressure lubrication, Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology 01/2013; DOI:10.1177/1350650113500945</i>	
3. Kheradmand, B., Muniandy, R., Hua, L.T., Yunus, R.B., Solouki, A., <i>An overview of the emerging warm mix asphalt technology (2014) International Journal of Pavement Engineering, 15 (1), pp. 79-94.</i>	
4. Mahdi, L.M.J., Muniandy, R., Yunus, R.B., Hasham, S., Aburkaba, E., <i>Effect of short term aging on organic montmorillonite nanoclay modified asphalt (2013) Indian Journal of Science and Technology, 6 (11), pp. 5434-5442.</i>	
5. Jusoh, E.R., Ismail, M.H.S., Abdullah, L.C., Yunus, R., Abdul Rahman,	

W.A.W., Effect of crude palm oil as plasticiser on the mechanical and morphology properties of low density polyethylene blown film (2013) International Journal of Materials Engineering Innovation, 4 (3-4), pp. 302-313.	3.487
6. Ghaemi, F., Yunus, R., Ahmadian, A., Salahshour, S., Suleiman, M., Saleh, S.F., Application of fuzzy fractional kinetic equations to modelling of the acid hydrolysis reaction (2013) Abstract and Applied Analysis, 2013, art. no. 610314.	
7. Zulkifli, N.W.M., Kalam, M.A., Masjuki, H.H., Shahabuddin, M., Yunus, R., Wear prevention characteristics of a palm oil-based TMP (trimethylolpropane) ester as an engine lubricant (2013) Energy, 54, pp. 167-173.	
8. Sayyar, S., Abidin, Z.Z., Yunus, R., Optimisation of solid liquid extraction of jatropha oil using petroleum ether (2013) Asia-Pacific Journal of Chemical Engineering, 8 (3), pp. 331-338.	
9. Alhassan, F.H., Yunus, R., Rashid, U., Sirat, K., Islam, A., Lee, H.V., Taufiq-Yap, Y.H., Production of biodiesel from mixed waste vegetable oils using Ferric hydrogen sulphate as an effective reusable heterogeneous solid acid catalyst (2013) Applied Catalysis A: General, 456, pp. 182-187.	
10. Soltani, N., Saion, E., Hussein, M.Z., Yunus, R.B., Navaseri, M., Characterization of CdS Nanoparticles Synthesized using Microwave assisted Polyol Method (2013) Advanced Materials Research, 667, pp. 122-127.	
11. Umer Rashid, Farooq Anwar, Robiah Yunus, Alaa H. Al-Muhtaseb, Transesterification for Biodiesel Production using Thespesia populnea Seed Oil: An Optimization Study, International Journal of Green Energy, , DOI: 10.1080/15435075.2013.853177	
12. H.V. Lee, Y.H. Taufiq-Yap, M.Z. Hussein, R. Yunus , Transesterification of jatropha oil with methanol over MgeZn mixed metal oxide catalysts, <i>Energy</i> : 49, 12-18, 2013.	3.487
13. Umer Rashid, Muhammad Ibrahim, Shahid Yasin, Robiah Yunus , Y.H. Taufiq-Yap, Gerhard Knothe, Biodiesel from Citrus reticulata (mandarin orange) seed oil, a potential non-food Feedstock, <i>Industrial Crops and Products</i> 45 (2013) 355– 359	2.469
14. Umer Rashid, Junaid Ahmad, Robiah Yunus , Hassan Masood, Azhari Muhammad Syam, Momordica charantia Seed Oil Methyl Esters: Kinetic Study and Fuel Properties, <i>Energies</i> , 6, 1-x manuscripts; doi:10.3390/en60x000x, 2013	1.865
15. Kalani, M., and Yunus R. , Effect of supercritical fluid density on nanoencapsulated drug particle size using the supercritical antisolvent method, <i>International Journal of Nanomedicine</i> , 7: 2165–2172, 2012.	4.976
16. Naidir, F., Yunus, R. , Rashid, U., Masood, H., Ghazi, T.I.M., Ramli, I., The kinetics of epoxidation of trimethylolpropane ester, <i>European Journal of Lipid Science and Technology</i> , Volume 114, Issue 7, Pages 816-822., 2012.	1.733
17. Muhammad, Khan, M.A. , Choong, T.S.Y. , Chuah, L.T.G., Yunus, R. , Yap, T.Y.H., Kinetics studies for the adsorption of β -carotene on mesoporous carbon coated monolith: Effect of concentration and temperature, <i>Asian Journal of Chemistry</i> , 24 (7), pp. 3155-3161. 2012.	Scopus
18. Nayereh Soltani, Elias Saion, Mohd Zobir Husseina, Afarin Bahrami, Kazem Naghavib, Robiah Yunus , Microwave irradiation effects on hydrothermal and Polyol synthesis of ZNS nanoparticles, <i>Chalcogenide Letters</i> , Vol. 9, No. 6, p. 265 – 274, 2012.	0.835

19. Sham, A.M., Yunus, R. , Ghazi, T.I.M, Choong, T.S.Y, Synthesis of Jatropha Curcas Oil-based biodiesel in a pulsed loop reactor, <i>Industrial Crops and Products</i> , Volume 37(1), pp 514-519, 2012.	2.507
20. Chang, T.-S, Masood, H., Yunus, R. , Rashid, U., Choong, T.S.Y., Biak, D.R.A, Activity of calcium methoxide catalyst for synthesis of high oleic palm oil based trimethylolpropane triesters as lubricant base stock, <i>Industrial and Engineering Chemistry Research</i> 51 (15) , pp. 5438-5442, 2012	2.072
21. Masood, H., Yunus, R. , Rashid, U., Choong, T.S.Y., Taufiq-Yap, A, Synthesis and characterization of calcium methoxide as heterogeneous catalyst for trimethylolpropane esters conversion reaction, <i>Applied Catalysis A, General</i> 425-426, pp. 184-190, 2012	3.384
22. Rashid, U., Ibrahim, M., Ali, S., Adil, M., Hina, S., Bukhari, I.H., Yunus, R., Comparative study of the methanolysis and ethanolysis of maize oils using alkaline catalysts, <i>Grasas y Aceites</i> , 63 (1), pp 35-43, 2012	0.748
23. Syam, A.M., Yunus, R. , Ghazi, T.I.M., Yaw, T.C.S., Synthesis of Jatropha curcas-based methyl ester and ethyl ester as biodiesel feedstocks, <i>Pertanika Journal of Science and Technology</i> , 20 (1), pp 165-173, 2012	Scopus
24. Ferra Naidir, Robiah Yunus, Irmawati Ramli, Tinia I Mohd Ghazi, synthesis of jatropha curcas based methyl ester and ethyl ester as biodiesel feedstocks, <i>Pertanika J. Sci & Tech</i> , 20(1), 177-185, 2012	Scopus
25. Mahta Sadegh Vishkaei, Robiah Yunus , Mohamad Amran Mohd Salleh, Afshin Ahmady, Dayang Radiah Awang Biak, Mass Production of High-Purity Graphitic Carbon Nanospheres by Chemical Vapour Deposition Method, Fullerenes, <i>Nanotubes and Carbon Nanostructures</i> , 20 (2), pp 109-118, 2012.	0.631
26. Kalani, M., Yunus R. , Abdulah, N., Optimizing the super critical antisolvent process parameters to minimize the particles sizes of nano encapsulated paracetamol inside LPLA, <i>Journal of Nanomedicine</i> , 6:1101-1105, 2011.	4.976
27. Kalani, M., and Yunus R. , Application of supercritical antisolvent method in drug encapsulation:a review, <i>Journal of Nanomedicine</i> , 6:1429-1442, 2011	4.976
28. Muhammad, Moonis Ali Khan, Thomas S.Y. Choong, T.G. Chuah, Robiah Yunus , Y.H. Taufiq Yap, Desorption of -carotene from mesoporous carbon coated monolith: Isotherm, kinetics and regeneration studies, <i>Chemical Engineering Journal</i> 173 (2011) 474– 479.	2.816
29. M.Y. Harun, A.B. Dayang Radhiah, Z. Zainal Abidin, R. Yunus , Effect of physical pretreatment on dilute acid hydrolysis of water hyacinth (<i>Eichornia crassipes</i>), <i>Bioresource Technology</i> , 102(8):5193-9, 2011.	4.253
30. Rozita Omar, A. Idris, R. Yunus , K. Khalid, M.I. Aida Isma, Characterization of empty frit bunch for microwave-assisted pyrolysis, <i>Fuel</i> , 90, 1536-1544, 2011.	3.179
31. Zurina Z. Abidin, N. Ismail, R. Yunus , I.S. Ahamad & A. Idris, A preliminary study on Jatropha curcas as coagulant in wastewater treatment, <i>Environmental Technology</i> , 32:9, 971-977, 2011.	1.007
32. Ferra Naidir, Robiah Yunus. , Tinia Idaty Mohd. Ghazi, Irmawati Ramli, Response Surface Methodology for Optimization of Epoxidized Trimethylolpropane Ester Synthesis from Palm Oil, <i>International Journal of Chemical Reactor Engineering</i> , Vol 9, 2011.	0.640
33. Riza Wirawan, S.M. Sapuan, Robiah Yunus , Khalina Abdan, Elastic and viscoelastic properties of sugarcane bagasse –filled poly (vinyl chloride)	1.587

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104. Fateme Rezaei, **Robiah Yunus** and Mohd Amran Salleh. Carbon Nanotube Growth on Short Carbon Fiber by Fluidized Bed Reactor. 3rd National Carbon Fiber On and Composites 2007.

105. S.M.Z., Sharifah Mazrah, A.R., Suraya, Y., **Robiah Yunus**, L., Nor Azowa S., Suriani. Effect of Whiskerization Treatment on Carbon Fibers via CVD Method to the Tensile Properties of Carbon Fiber Reinforced Polypropylene Composites. 3rd National Carbon Fiber On and Composites 2007.

106. **Robiah Yunus**, Nor Hasni Zahari, Mohamad Amran Mohd Salleh, Nor Azowa Ibrahim. Development of Carbon Fiber Reinforced Polypropylene for Bumper Beam Application. 3rd National Carbon Fiber On and Composites 2007.

107. Fateme Rezaei, **Robiah Yunus** and Nor Azowa Ibrahim, Effect of Fiber Length on Thermomechanical Properties of Short Carbon Fiber Reinforced Polypropylene Composites. World Engineering Congress 2007 (WEC 2007), August 2007, Penang, Malaysia.

108. C. Vargis, A.R. Suraya, **R. Yunus**, S. Shamsudin. CVD Whiskerization Treatment Process For the Enhancement of Carbon Fiber Composite Flexural Strength. 3rd World Engineering Congress 2007, Penang, Malaysia. 5 – 9 August 2007.

109. Fateme Rezaei, **Robiah Yunus** and Mohd Amran Saleh, Carbon Nanotube Growth on Short Carbon Fiber by Fluidized Bed Reactor, 3rd National Carbon Fiber Conference 2007 (NCFC2007), August 2007, Perhentian, Trengganu, Malaysia.

110. Fateme Rezaei, **Robiah Yunus** and Nor Azowa Ibrahim, Development of Short Carbon Fiber Reinforced Polypropylene Composite, International

<p>Seminar on Polymer Science and Technology (ISPST2007), October 2007, Tehran, Iran.</p> <p>111. Fateme Rezaei, Robiah Yunus and Mohd Amran Saleh, Carbon Nanotube Growth on Short Carbon Fiber by Fluidized Bed Reactor, Nanotech Malaysia 2007 and Asia Nano Forum Summit (ANFoS2007), December 2007, Kuala Lumpur, Malaysia.</p> <p>112. Fateme Rezaei and Robiah Yunus, Growth of Carbon Nanotube on Short Carbon Fiber, 21th Symposium of Malaysian Chemical Engineers (SOMChE 2007), December 2007, University Putra Malaysia, Malaysia.</p> <p>113. Azhari, Robiah Yunus, Suraya Abdul Rasyid, Luqman Chuah Abdullah (2006). Synthesis of palm biodiesel using sodium methoxide catalyst. Proceeding in 20th Symposium of Malaysian Chemical Engineers, Universiti Teknologi Mara (UiTM), Shah Alam, Selangor, 19-21 December, 2006.</p> <p>114. Teuku Galliv Sachrul and Robiah Yunus, The Design of HDPE Liner For Composite CNG Tanks, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.</p> <p>115. Sarina Sulaiman and Robiah Yunus, Carbon Fiber Reinforced Carbon for Brake Pad Application, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.</p> <p>116. Siti Zubaidah Sulaiman, Robiah Yunus, A. Fakhru'l-Razi and Chuah, TG, Batch Production of Trimethylolpropane Ester from Palm Oil as Lubricant Base stock, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.</p> <p>117. Anita Abu Bakar and Robiah Yunus, the Effect of Hydroxyl (-OH) Group on Lubrication Properties of Palm Oil-Based Synthetic Esters, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.</p> <p>118. Nor Halaliza. Alias and Robiah Yunus, Formulation of Natural Synthetic Lubricant for Hydraulic Fluid, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.</p> <p>119. Azhari and Robiah Yunus, Preliminary Study on Synthesis of Palm Biodiesel, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.</p> <p>120. Sumaiya Z. A., Gregory F. L. Koay, Chuah T. G., Parthiban S., Robiah Y., Salmiah A. and Thomas S. Y. Choong, Effect of Cooling Modes on Solvent Crystallization of Palm Oil Based Dihydroxystearic Acid using Ethanol, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.</p> <p>121. Suraya Abdul Rashid, Christina Vargis and Robiah Yunus, Development of Whiskerization Process on Carbon Fibers via Catalytic Chemical Vapour Deposition, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.</p> <p>122. U.U Abdullahi, S M Bashi, Robiah Yunus, Mohibullah, Nurdin Hj. Amir, The Potentials of Palm Oil as a Dielectric Fluid, Second National Power and Energy Conference (PECon) 2004. 29-30 Nov 2004, Shah Alam, Selangor.</p> <p>123. Umar F. Yusuf, S. E. Iyuke, R. Rosli, Robiah Yunus, Fakhru'l-Razi A., N. Billa, The Inhibition of human malignant cell growth by crude water extract of cassava (<i>Manihot esculenta</i> Crantz) and commercial linamarin: a preliminary investigation.</p>	
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<p>124. Azira S.D., Wong. T.N., Robiah Yunus, Thomas Choong S.Y., and Chuah T.G., Kinetics Studies of Adsorption of Methylene Blue onto palm Kernel Shell Activated carbon, RCYC 2004, 1-14 April 2004, USM, Pulau Pinang.</p> <p>125. Robiah Yunus, A. Fakhru'l-Razi, T.L. Ooi and S.E. Iyuke, Synthesis of Palm Oil-based Trimethylolpropane Esters for Production of Biodegradable Lubricant, Proceedings of the Second World Engineering Congress 2002: Chemical and Environmental Engineering Conference, Sarawak, 2002.</p> <p>126. Robiah Yunus, A. Fakhru'l-Razi, T.L. Ooi and S.E. Iyuke, Lubrication Properties of Palm Oil-Based Trimethylolpropane Esters, Proceedings of the Oils and Fats International Congress, Kuala Lumpur, 2002</p> <p>127. Robiah Yunus, A. Fakhru'l-Razi and Z. Zainal Abidin, Ed. Proceedings of the World Engineering Congress '99: Chemical and Environmental Engineering Conference, Kuala Lumpur, 1999.</p> <p>128. Robiah Yunus, Z. Manan and Wong S.L. Minimization of Energy Consumption in a Cryogenic Plant Through Process Modification and Optimisation Using Steady State Process Simulator, Proceedings of 11th Malaysian Chemical Engineers Symposium (SOMCE '95), UTM, Terengganu, June, 1995</p> <p>129. Robiah Yunus, K. Yusof, Z. A. Manan., Development in Physical Properties Compilation of Palm Oil Based Oleo chemicals, Proceedings of COSTAM' 95, Kuala Lumpur. August, 1995</p> <p>130. Robiah Yunus and Adlan Sanusi Zakaria, Integrasi Proses Loji Pemprosesan Gas bagi Penoptimuman Perolehan Semula Tenaga, Proceedings of Faculty of Chemical and Natural Resources Engineering Research Seminar, August 1995</p> <p>131. Khairiyah Yusof, Robiah Yunus, Z. A. Manan, Multimedia in Chemical Engineering Education and Training: A Universiti Teknologi Malaysia Experience, Proceedings of 11th Malaysian Chemical Engineers Symposium (SOMCE '95), UTM, Terengganu, June, 1995.</p> <p>132. Robiah Yunus and Sharbanon Shariff, Production of Methyl Ester from Palm Oil Using Immobilized Lipase, Proceedings of Faculty of Chemical and Natural Resources Engineering Research Seminar, June 1993.</p> <p>133. Robiah Yunus, The Application Of Short Cut Models in Distillation Control Design, Proceedings of the 6th Symposium of Malaysian Chemical Engineers, June, 1990</p> <p>134. Robiah Yunus et al., Adsorption of Free Fatty Acids From Crude Palm Oil Using Rice Husk Ash, Proceedings of the Symposium on Tropical Natural Resources, Dec. 1993.</p> <p>135. Robiah Yunus, Estimations of Physical Properties of Palm Oil Based Methyl Esters using Aspen Plus, Proceedings of Faculty of Chemical and Natural Resources Engineering Research Seminar, July 1994.</p> <p>136. Robiah Yunus and Teng Kok Sia, Development of Physical Properties Data Bank for Palm Oil Based Methyl Esters, Proceedings of the 10th Malaysian Chemical Engineers Symposium, USM, Penang, August 1994.</p> <p>137. Robiah Yunus et al., Process Integration of an Oleochemicals Plant, presented at COSTAM' 94, Kuala Lumpur. August 1994.</p>	
<p>13. AWARDS</p>	

138.

List of Awards

International Awards

1. Silver Medal in INPEX 2010, Pittsburgh, USA on Innovative Technology in Biodiesel Production from Jatropha Oil (Environment Category), June 2010.
2. Bronze Medal in INPEX 2010, Pittsburgh, USA on Innovative Technology in Biodiesel Production from Jatropha Oil (Alternative Energy Category), June 2010.
3. Bronze Medal in INPEX 2010, Pittsburgh, USA on Innovative Technology in Biodiesel Production from Jatropha Oil (Science Category), June 2010.
4. Special Medal, Formulation of Carbon Fiber Reinforced Polypropylene composite for Car Bonnet Application, EUREKA 2007.
5. Gold Medal, Formulation of Carbon Fiber Reinforced Polypropylene composite for Car Bonnet Application, EUREKA 2007.
6. Gold Medal in INPEX 2006, Pittsburgh, USA on Isolation and Encapsulation of Cassava Linamarin in Biodegradable Nanoparticles for Cancer Cells Targeting, June 2006.
7. Gold Medal in International Product Exhibition, IENA 2004, Nuremberg, Germany, on RYSOIL- High Performance Synthetic Lubricant from Palm Oil, October 2004.
8. Gold Medal in British Invention Show 2004, Alexandria Palace, London, on RYSOIL- High Performance Synthetic Lubricant from Palm Oil, October 2004.
9. Silver Medal in British Invention Show 2004 (Consumer Product), Alexandria Palace, London, on RYSOIL-High Performance Synthetic Lubricant from Palm Oil, October 2004.
10. Silver Medal in International Product Exhibition, Geneva, Switzerland, entitled Environmentally Friendly Synthetic Lubricant from Palm Oil, April 2004.
11. Silver Medal in International Product Exhibition, Geneva, Switzerland, entitled Environmentally Friendly Synthetic Lubricant from Palm Oil, April 2004.

■ **National**

12. Gold Medal, Low-Cost Technology for Acid Hydrolysis of Oil Palm Empty Fruit Bunch For Bioethanol Production, Pameran Reka Cipta, Penyelidikan dan Inovasi (PRPI UPM), 2011.
13. Gold Medal, Technology for Production of Encapsulated Nanoparticles for Controlled Drug Delivery, Pameran Reka Cipta, Penyelidikan dan Inovasi (PRPI UPM), 2011.
14. Bronze Medal, Jatropha Curcas L. Fruit Shelling Machine, MTE 2010.
15. Silver Medal, Ultrasonic Assisted Solvent Extraction of Jatropha Oil , MTE 2010
16. Gold Medal, Locally Fabricated Supercritical Particle Formation Unit, Pameran Reka Cipta, Penyelidikan dan Inovasi (PRPI UPM), 2009.
17. Gold Medal, Jatropha Curcas L. Fruit Shelling Machine, Pameran Reka Cipta Penyelidikan dan Inovasi (PRPI UPM), 2009

18. 2008 Excellence in Service Award, Faculty of Engineering, Universiti Putra Malaysia
19. Bronze Medal, Formulation of Carbon Fiber Reinforced Polypropylene composite for Car Bonnet Application, ITEX 2007.
20. Bronze Medal, Innovative Technology in Biodiesel Production from Jatropha (MTE 2007, bronze)
21. Silver Medal, Pameran Reka Cipta, Penyelidikan dan Inovasi (PRPI) 2007 on Production of Nano-composite Particles using Supercritical Antisolvent (SAS) Technique.
22. 2ND Asian BioManufacturing Conference Sheraton Imperial Hotel, Kuala Lumpur, 3-4 Dec 2007, The Best Presentation Award
23. Anugerah Saintis Cemerlang, Kementerian Pengajian Tinggi, 2004 and 2005.
24. 2003 Excellence in Service Award, Faculty of Engineering, Universiti Putra Malaysia.
25. Gold Medal in Science and Technology Expo. 2003, Ministry of Science and Technology, August 2003.
26. Gold Medal in Invention & Research Exhibition 2003, Research Management Centre (RMC), Universiti Putra Malaysia, July 2003,
27. 1999 Excellence in Service Award, Faculty of Engineering, Universiti Putra Malaysia, July 2000.

14. PATENTS

List of Patents

1. **Robiah Yunus**, Fakhru'l-Razi, A., and Ooi T.L. "Synthesis of Trimethylolpropane Esters as Lubricant Base Stock", Malaysian Patent Registration Number: MY-140833-A
2. **Robiah Yunus**, Mahshid Kalani: A Method for producing polymer-encapsulated nanoparticles, Application Number: PI 2011003395.
3. Zurina Zainal Abidin and **Robiah Yunus**, Coagulant Agent for Water Treatment, Patent Pending, Patent Number 2011700007
4. **Robiah Yunus**, Mahta Sadeh Vishkaei, Mohamad Amran Mohamad Salleh, and Dayang Radhiah Awang Biak, Method for Producing High Purity Graphitic Carbon Nanostructures, PI number: PI 2010003360.
5. **Robiah Yunus** and Rosnah Shamsuddin, Jatropha Curcas L. Fruit Shelling Machine, PI number: PI 2010002417.
6. **Robiah Yunus**, and Azhari. "Integrated Method For Producing Biodiesel Fuel From Crude Jatropha Curcas" PI 20093286.
7. **Robiah Yunus**, NorAzowa Ibrahim and Fateme Rezaei "Light Weight Exterior Body parts for Vehicle and Composite Used Thereof", PI number: PI20070745
8. Norhafizah Abdullah, Rozita Rosli, Fakhru'l Razi and **Robiah Yunus** "Therapeutic Agent for Treating Cancer; Inventor" PI number: PI20072475.

15. CONSULTANCY WORKS

Ongoing

1. Consulting Engineer for Biotech Corporation on the SFE project, 2008 – 2010
Consulting Engineer for
Biotech Corporation Malaysia
Malaysian Biotechnology Corporation Sdn. Bhd.
Corporate Office
Level 23, Menara Atlan,
161 Jalan Ampang,
50450 Kuala Lumpur,

Job descriptions:

The project involves the design and construction of the Supercritical Fluid Extraction (SFE) and Particle Formation (PF) Plant licensed by the Biotech Corp and to be installed at Universiti Putra Malaysia (UPM). The responsibilities are:

- Review and comment on technical documents such as design basis, basic engineering, and detail engineering design for the SFE plant.
- Review and comment on engineering drawings submitted by equipment supplier
- Ensure the design of the SFE and PF Plant is in line with UPM requirement
- Provide technical input on supercritical fluid application and safety requirements.

2. Consulting Engineer for Solution Biogen Sdn Bhd on the Biolubricant Pilot Project project, 2008 – todote.

Consulting Engineer (One year industrial attachment)
Solution Biogen Sdn Berhad
No. 3, Jalan TPK 2/4,
Taman Perindustrian Kinrara,
47100 Puchong,
Selangor Darul Ehsan,
Malaysia.

Job descriptions:

The project involves the design and construction of the Biolubricant Pilot Plant under the Technofund project to produce 700 tonnes/year of TMP ester based on the technology from the Universiti Putra Malaysia (UPM). The project is financed by the Ministry of Science, Technology and Innovation (MOSTI). Among the responsibilities are:

- Perform steady state process simulation using Aspen Plus to generate process flow diagram and operating conditions and to establish the design basis for the plant.
- Generate the technical documents such as process design (PFD and P&ID), and review detail engineering design for the pilot plant.
- Review and comment on engineering drawings submitted by equipment fabricator and manufacturer.
- Commission the operation of the plant in accordance to the design criteria
- Provide technical input on plant operation and safety

3. Contract Research with Petronas, ABF Fertilizer and Kulim Fertilizer on 'Slow Release Fertilizer', 2011 - 2014
4. Contract Research with Puncak Niaga to develop alternative coagulant from biobased products, 2008-2010.

Completed

5. Consulting Engineer for Oleon Sdn. Bhd. on the Synthesis of Jatropha Oil based TMP Ester, 1st April – 30th November 2008.
6. Consultancy project with Terengganu UPEN on ' Manpower Requirement for the Industry in Terengganu, 1st January 1994 – 1st January 1995
7. Consultancy project with Frank Small & Associates on 'Sectoral Study of the Chemical Industry in Malaysia', from 1st January 1994 – 1st January 1995

16. CONFERENCES AND SEMINARS ATTENDED/PRESENTED

International

1. Azhari Muhammad Syam, Robiah Yunus, Tinia Idaty Mohd. Ghazi, Thomas Choong Shean Yaw, Alcoholysis of Jatropha Curcas Triglycerides using Sodium Methoxide as Catalyst, World Engineering Congress, Sarawak, 2010.
2. Rose Jusoh, M.H. Syah Ismail, L. Chuah Abdullah, R. Yunus and W. A. R. Wan Azian. (2009). Effect of CPO as Filler in LDPE. 3rd International Conference on Chemical and Bioprocess Engineering (ICBPE 2009), 12-14 August, 2009, Kota Kinabalu, Sabah.
3. Robiah Yunus and Azhari, Kinetics Of Transesterification of Jatropha Curcas Oil With Alcohol In Presence of Alkaline Catalyst, INREC 2010, Amman, Jordan, March 2010.
4. Robiah Yunus and Fateme Rezaei, Synthesis of Carbon Nanotubes on Short Carbon Fiber by Fluidized Bed CVD, World Congress of Chemical Engineering (WCCE8), 23-27 August 2009, Canada.
5. Robiah Yunus, Alternative Diesel Fuel and Synthetic Lubricant from Palm Oil. International Seminar on Green Technology and Engineering (ISGTE), 25-26 July 2007, Universitas Malahayati Bandar Lampung, Indonesia
6. Ferra Naidir, Robiah Yunus, Tinia Idaty Mohd. Ghazi, Irmawati Ramli. Response Surface Methodology for Optimization of Epoxidation of Palm Oil-based Trimethylolpropane Ester with Peracetic Acid. 3rd International Conference on Chemical & Bioprocess Engineering 2009. 12th – 14th August 2009.
7. Sepidar Sayyar, Zurina Zainal Abidin, Azahari, Robiah Yunus. Optimization of Solid Liquid Extraction of Jatropha Seeds. FEIIC Symposium on Engineering and Technology, 15-16 December 2008.
8. Sumaiya Z. A. , Abdullah L. C., Robiah Y., Salmiah A.. Seeded Crystallization of Dihydroxystearic Acid (DSHA) – Effect on Yield, Purity and Crystal Size Distribution, 14th Regional

Symposium on Chemical Engineering 2007.

9. Robiah Yunus, Chang P.Y., Lee L.H., and Azhari. Preliminary Study on Extraction and Synthesis of Biodiesel. from *Jatropha Curcas* Seeds and Soybean, 1st International Conference on Natural Resources Engineering & Technology 2006, 24-25th July 2006.
10. Robiah Yunus et al., Aspen Plus Simulation and Process Integration of an Oleochemicals Plant, ASPEN WORLD '94, Boston, MA, USA, November 1994.
11. 3rd International Conference on Chemical and Bioprocess Engineering in conjunction with 23rd Symposium of Malaysian Chemical Engineers (SOMChE 2009), 12-14 August 2009, Sabah (Chairperson).
12. World Exhibition on Innovation, Research and New Technologies (EUREKA) 2007, 22-25 November 2007, Belgium.
13. 17th International Science Conference 2009, 14-17 December 2009, Shah Alam, Selangor.

National

14. One day Seminar on Green Technology and Renewable Energy organised by SET, Kuala Lumpur, 21 Oct 2010.
15. Workshop on Leadership and Self Deception organised by Arbinger (M) Sdn Bhd, May 2010.
16. Muhammad, Chuah T.G, Taufiq Yap Y. H., Robiah Yunus and T.S.Y. Choong, The Effect of Polyethylene Glycol Composition on Mesoporous Carbon Coated Monolith Derived from Furfuryl Alcohol, SOMCHE 2010, June 2010.
17. Course on Legislative Requirements for Hazardous Chemical, CHRA Module 1, conducted by NIOSH, 2 to 4 Nov 2009.
18. Riza Wirawan, S.M. Sapuan, **Robiah Yunus**, Khalina Abdan. Sugarcane Bagasse Reinforced PVC: From Waste to Green Composites. The 9th National Symposium on Polymeric Materials 2009 (NSPM 2009). 14 -16 December 2009.
19. Ferra Naidir, **Robiah Yunus**, Tinia Idaty Mohd. Ghazi, Irmawati Ramli. Preliminary Study on Synthesis of Epoxidized Palm Oil-based Trimethylolpropane Ester with Peracetic Acid. 22nd Symposium of Malaysian Chemical Engineers 2008 in conjunction with the 15th Regional Symposium on Chemical Engineering 2008, 2 -3 December 2008.
20. C. Vargis, A.R. Suraya, **R. Yunus**, S. Shamsudin. CVD Whiskerization Treatment Process For the Enhancement of Carbon Fiber Composite Flexural Strength. 3rd World Engineering Congress 2007, Penang, Malaysia. 5 – 9 August 2007.
21. Fateme Rezaei, **Robiah Yunus** and Mohd Amran Saleh, Carbon Nanotube Growth on Short Carbon Fiber by Fluidized Bed Reactor, 3rd National Carbon Fiber Conference 2007(NCFC2007), August 2007, Perhentian, Trengganu, Malaysia.
22. Azhari, **Robiah Yunus**, Suraya Abdul Rasyid, Luqman Chuah Abdullah (2006). Synthesis of palm biodiesel using sodium

- methoxide catalyst. Proceeding in 20th Symposium of Malaysian Chemical Engineers, Universiti Teknologi Mara (UiTM), Shah Alam, Selangor, 19-21December, 2006.
20. Sumaiya Z. A., Gregory F. L. Koay, Chuah T. G., Parthiban S., **Robiah Y.**, Salmiah A. and Thomas S. Y. Choong, Effect of Cooling Modes on Solvent Crystallization of Palm Oil Based Dihydroxystearic Acid using Ethanol, 2nd International Conference on Chemical and Bioprocess Engineering, 8-10 December 2005.
 21. Azira SD., Wong. T.N., **Robiah Yunus**, Thomas Choong S.Y., and Chuah T.G., Kinetics Studies of Adsorption of Methylene Blue onto palm Kernel Shell Activated carbon, RCYC 2004, 1-14 April 2004, USM, Pulau Pinang.
 22. **Robiah Yunus**, A. Fakhru'l-Razi, T.L. Ooi and S.E. Iyuke, Synthesis of Palm Oil-based Trimethylolpropane Esters for Production of Biodegradable Lubricant, Proceedings of the Second World Engineering Congress 2002: Chemical and Environmental Engineering Conference, Sarawak, 2002.
 23. **Robiah Yunus**, A. Fakhru'l-Razi and Z. Zainal Abidin, Ed. Proceedings of the World Engineering Congress '99: Chemical and Environmental Engineering Conference, Kuala Lumpur, 1999.
 24. **Robiah Yunus**, Z. Manan and Wong S.L. Minimization of Energy Consumption in a Cryogenic Plant Through Process Modification and Optimisation Using Steady State Process Simulator, Proceedings of 11th Malaysian Chemical Engineers Symposium (SOMCE '95), UTM, Terengganu, June, 1995
 25. **Robiah Yunus**, K. Yusof, Z. A. Manan., Development in Physical Properties Compilation of Palm Oil Based Oleo chemicals, Proceedings of COSTAM' 95, Kuala Lumpur. August, 1995
 26. **Robiah Yunus** and Adlan Sanusi Zakaria, Integrasi Proses Loji Pemprosesan Gas bagi Penoptimuman Perolehan Semula Tenaga, Proceedings of Faculty of Chemical and Natural Resources Engineering Research Seminar, August 1995
 27. Khairiyah Yusof, **Robiah Yunus**, Z. A. Manan, Multimedia in Chemical Engineering Education and Training: A Universiti Teknologi Malaysia Experience, Proceedings of 11th Malaysian Chemical Engineers Symposium (SOMCE '95), UTM, Terengganu, June, 1995.
 28. **Robiah Yunus** and Sharbanon Shariff, Production of Methyl Ester from Palm Oil Using Immobilized Lipase, Proceedings of Faculty of Chemical and Natural Resources Engineering Research Seminar, June 1993.
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 30. **Robiah Yunus** et al., Adsorption of Free Fatty Acids From Crude Palm Oil Using Rice Husk Ash, Proceedings of the Symposium on Tropical Natural Resources, Dec. 1993.
 31. **Robiah Yunus**, Estimations of Physical Properties of Palm Oil Based Methyl Esters using Aspen Plus, Proceedings of Faculty of

Chemical and Natural Resources Engineering Research Seminar,
July 1994.

32. **Robiah Yunus** and Teng Kok Sia, Development of Physical Properties Data Bank for Palm Oil Based Methyl Esters, Proceedings of the 10th Malaysian Chemical Engineers Symposium, USM, Penang, August 1994.
33. **Robiah Yunus** et al., Process Integration of an Oleochemicals Plant, presented at COSTAM' 94, Kuala Lumpur. August 1994
34. BioMalaysia 2009, 17-19 November 2009, Kuala Lumpur Convention Centre (KLCC).
35. Malaysia Biodiesel Outlook. National Renewable Energy Summit 2009 (RENEW 2009), 18-19 August 2009, Sarawak (Speaker).

17. PUBLIC SERVICES

UPM

- AJK Penamaan Penyeliaan dan Pemeriksa, UPM
- AJK Pameran/Pemilihan Produk, FK
- AJK Lembaga Jaminan Kualiti, FK
- Penyelaras Program DEng, UPM
- Penyelaras Program MS Process Safety and Loss Prevention, 2009-2011
- Pengerusi, JK Jaringan Industri dan Masyarakat, ITMA
- Pengerusi, JK Keselamatan dan Pekerjaan, ITMA
- Pengerusi, JK Siswazah, ITMA
- Pengerusi, JK Penyelidikan, ITMA
- AJK Pembentukan Program, Master Bahan Komposit Lanjutan
- AJK Pembentukan Program, Postgraduate Diploma, Rubber Processing Technology, Kerjasama dengan LGM
- Internal examiners for PhD and Master students Viva
- Chairman, Evaluation Panel for ERGS, 2011
- Chairman, Evaluation Panel for FRGS, 2011
- Evaluator for Sciencefund projects
- Evaluator for FRGS projects
- Evaluator for RUGS projects
- Speaker for Research Colloquium for UPM New Lecturers.
- Dialogue and article for publications of 'The Putra'.
- Prepared speech text for Chancellor/ Pro-Chancellor for Convocation Ceremony, 2008.
- Academic Advisor for undergraduate students since 1997-1999, 2003-2006, 2006-2011.

National

- Pengerusi Ganti JK Teknikal Dua Hala, Kementerian Perusahaan Perladangan dan Komoditi -UPM, Sektor Getah dan Jatropha, 2011-2014.

- External Evaluator for Sciencefund Grants, 2011.
- Provided Placements for Industrial Trainee Students:
 - ✓ 4 Students from UMP, 2010
 - ✓ 1 Student from USM, 2009
 - ✓ 2 students from Universiti dari Korea
 - ✓ 4 students dari MRSM, Kuala Lipis
- Technical Committe (TC), ISO manual (ISO/PC 242) on Energy Management.
- Panel Hakim, Projek Pertandinga Penyelidikan dan Inovasi Peringkat Kebangsaan Pelajar IPTA dan IPTS, 2011.
- Jury and External Committee, International Engineering Invention and Innovation, 2011
- Expert panel for Workshop on Energy Roadmap for Malaysia, MOSTI
- External examiners for PhD and Masters student viva for UTP, UTM, USM, UMS
- Council Member for Malaysian Council for Engineering Education, MCED (Chemical Engineering), Ministry of Higher Education
- Shortlisted as recipient for potential R&D project for commercialisation, MOSTI, 2010
- Shortlisted as recipient for potential R&D project for commercialisation, MOHE, 2010
- Shortlisted as the recipient for the Anugerah Inovasi Penyelidikan Awam dan Swasta, MOSTI.
- Facilitator for Workshop on Technical Roadmap for Chemical Engineering in Malaysia. IChemE.
- Evaluator for Promotion to Assoc Prof. For UNITEN
- Participated in exhibition in conjunction with KPPK Minister Visit to Jatropha LTN Plot.
- Judge for PNSB's Water Treatment Plant 2009 Competition, World Water Day 2009.
- Collaboration between UPM and National Feedlot Corporation Sdn Bhd (NFC) in a preparation to build 'Biogas Plant' System.
- Accreditation Panel for various chemical engineering programs conducted by private higher learning institutions in Malaysia such as UNIKL, UTP, UMP, UMS, Taylor's College, etc.
- Expert Evaluator for Diploma Programme of Chemical Engineering at UiTM Shah Alam.
- Journal Reviewer for Pertanika Journal, UTM Journal, JESTEC.
- Speaker for Aspen Plus Workshop Organised by Univ. Malaysia Pahang.
- Evaluator for Pre-accreditation of Chemical Eng. Programme for Univ. Malaysia Pahang.
- Invited Speaker for National Renewable Energy Summit 2009
- Member of Jawatankuasa Teknikal Sektor Getah dan Jatropha Kerjasama Dua Hala KPPK-UPM
- Participated in Idea Generation Workshop on Fertilizer organised by PETRONAS
- Chairman of Organising Committee for SOMCHE 1999, SOMCHE 2006

- International**
- 4th Malaysian Chem-E-Car Competition 2009, 4-5 March 2009, Malacca (Co-chairperson).
 - Advisory Committee for SOMCHE 2008, and SOMCHE 2007
 - Organising Committee for WEC 2000, WEC 2010
 - Paper reviewer for Conference on Natural Resources and Green Technology, 2010.
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- Represented Malaysia together with SIRIM as technical committee to draft ISO manual (ISO/PC 242) on Energy Management, London. November 2009
- Referees for Honorary Register (CEng) for Engineering Council, UK.
- Invited to review papers for journals published by the American Chemical Society
- Invited to review papers for ISI Thomson journals such as
 - ✓ Fuels and Energy
 - ✓ Tribology International
 - ✓ Industrial Crops and Products
 - ✓ European Journal of Lipids Science and Technology.
 - ✓ Journal of Molecular Catalysis B: Enzymatic
 - ✓ Journal of the American Oil Chemist Society
- Invited Speaker for International Seminar on Green Technology and Engineering, Lampung, Indonesia.
- Invited Speaker for International Conference on Research and Development in Oil and Gas, Petronas, 2009
- Session Chair for various international conferences such as WEC 2010, ICCST 2011.
- Referee for Honorary Register (CEng) for Engineering Council, , UK.
- Initiated Research Collaboration with International Bodies such as ATB Germany and Oleon, Belgium.
- Paper reviewer for International Conference on Process Engineering and Advanced Materials 2010 (ICPEAM 2010)
- Paper reviewer for International Conference on Renewable and Nuclear Energy, 2010 (INRET 2010)

18. CO-CURRICULUM ACTIVITIES

- Chartered Engineer, UK Engineering Council, 2006, No 20047762
- Fellow, Institution of Chemical Engineers UK, 2006
- Certified Chemical Hazards and Risk Assessor (CHRA), 2009
- Board Member for Institution of Chemical Engineers UK, Malaysia Branch
- Corporate Member, Institution of Chemical Engineers Malaysia, 2004
- Member, American Inst. of Chemical Engineers, 2002 (No. 90166079)
- Member, Malaysian Society of Engineers and Technologist, 2009

- Member of Malaysian Tribology Society, 2009
- Member, Society of Tribologist and Lubrication Engineers, 2001 (44529 M)
- Graduate Member, Institution of Engineers Malaysia, 2003 (G 24784)
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