

# Curriculum Vitae



## 1. Personal Record:

Name : **Professor Dr. Hanafi Ismail [Felo of Academy Science Malaysia]**  
(e-mail: [hanafi@eng.usm.my](mailto:hanafi@eng.usm.my))  
**[h-Index (Scopus): 33 and Total Citation Index: 4,147 until September 2013]**

Sex : Male  
Date of Birth : 11 - 07 - 61  
Citizenship : Malaysian  
Marital Status : Married  
Number of Children : Six  
Present Position/adress : **Professor and Dean**, School of Materials &  
Mineral Resources Eng.,USM Eng. Campus, 14300  
Nibong Tebal, Penang, Malaysia.

Field of Specialisation : Polymer Science and Engineering (Rubber, Plastic,  
Rubber-Rubber Blends, Rubber-Plastic Blends, Plastic-  
Plastic Blends, Thermoplastic Elastomer (TPE's), Polymer  
Recycling and Polymer Composites)

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## 2. Education Record

*(College/universities attended and Qualifications/Degrees obtained with dates):-*

<u>College/University</u>	<u>Qualification</u>	<u>Date</u>
Universiti Kebangsaan B.Sc Malaysia (UKM)	(Hons) <b>(Chemical Process Technology)</b>	August 1985
Loughborough University of Technology,UK	PhD (Polymer Engineering)	December 1994

3. **Working Experience** (*Details of all previous positions and current position held with dates*):-

<u>Post</u>	<u>Organisation/Department</u>	<u>Dates</u>
Assistant Lecturer (Guru)	Chemical Process Technology Section, Universiti Sains Malaysia (USM)	July 87-Feb 1995
Lecturer	Polymer Technology Section, School of Industrial Technology, Universiti Sains Malaysia (USM)	Feb.95 – April 2002
Lecturer	Polymer Engineering Department, School of Materials and Mineral Resources Engineering, Engineering Campus, USM	May 2002-Present
Assoc. Professor	Polymer Engineering Department, School of Materials and Mineral Resources Engineering, Engineering Campus, USM	April 2000
Professor	Polymer Engineering Department, School of Materials and Mineral Resources Engineering, Engineering Campus, USM	December 2003
Deputy Dean	School of Materials and Mineral Resources Engineering, Engineering Campus, USM	January 2010
Dean	School of Materials and Mineral Resources Engineering, Engineering Campus, USM	January 2013

4. **Awards/Scholarship and Membership**:-

**Award/Scholarship**

1. **Japanese Society for the Promotion of Science (JSPS) Fellowship 1996**, Kyoto Institute of Technology.

2. Universiti Sains Malaysia Academic Staff Higher Education Scholarship (ASHES)/Federal Government of Malaysia Scholarship (Sept. 91- Feb. 95) Federal Government of Malaysia Scholarship (1981- 1985)
3. Universiti Sains Malaysia Excellent Staff for 1998 (School of Industrial Technology)
4. **Khwarizmi International Award** from Iranian Research Organization for Science and Technology (IROST) (Feb. 2000)
5. **Asian and Pasific Centre for Transfer of Technology (APCTT) International Award** (From the United Nations Economic and Social Commission for Asia and the Pasific (ESCAP) (May 2000).
6. **Islamic Development Bank Merit Scholarship Programme Award 2001.**
7. **Silver medallist National Award** at the National Science, Technology and Environment Ministry (**MOSTE 2001**) Silver Anniversary Exposition in Kuala Lumpur from June 30- July 3, 2001.
8. **ISESCO International Award** from Islamic Educational, Scientific and Cultural Organization (December 2001)
9. **Sanggar Sanjung (Hall of Fame) Award 2002** from Universiti Sains Malaysia (11 January 2002)
10. **Bronze medallist at the 13<sup>th</sup> International Invention, Innovation, Industrial Design and Technology Exhibition (ITEX 2002), at Mid Valley Exhibition Centre, Kuala Lumpur, 29-31 March 2002.**
11. **Bronze medallist National Award** at the National Science, Technology and Environment Ministry Exposition (**MOSTE 2002**) in Kuala Lumpur from November 2-4, 2002.
12. **Silver medallist at the 30<sup>th</sup> International Exhibition of Inventions, New Techniques and Products, Geneva, Switzerland 1<sup>st</sup> – 5<sup>th</sup> May, 2002.**
13. **Appreciation Research Award 2002 from Perak Foundation.**
14. **Sanggar Sanjung (Hall of Fame) Award 2003** from Universiti Sains Malaysia (24 January 2003)
15. **Gold medallist at the 14<sup>th</sup> International Invention, Innovation, Industrial Design and Technology (ITEX 2003) Exhibition, at Sunway Covention Centre, Petaling Jaya, 16-18 May 2003.**
16. Universiti Sains Malaysia Excellent Staff for 2002 (School of Materials and Mineral Resources)

Engineering)

17. **Silver medallist National Award** at the National Science, Technology and Environment Ministry Exposition (**MOSTE 2003**) in Kuala Lumpur at PWTC from August 7-9, 2003.
18. **Second Prize in Poster Competition Award** (Category: Material Science and Engineering) at The 12<sup>th</sup> Scientific Conference on Electron Microscopy, Langkawi, Kedah from 15-17 December 2003.
19. **Third Prize in Poster Competition Award** (Category: Material Science and Engineering) at The 12<sup>th</sup> Scientific Conference on Electron Microscopy, Langkawi, Kedah from 15-17 December 2003.
20. **Sanggar Sanjung (Hall of Fame) Award 2004** from Universiti Sains Malaysia (16 January 2004).
21. **Silver medallist** at the **32<sup>th</sup> International Exhibition of Inventions, New Techniques and Products, Geneva, Switzerland 31 Mac – 4 April 2004.**
22. **Gold medallist** at the **14<sup>th</sup> International Invention, Innovation, Industrial Design and Technology (ITEX 2004) Exhibition, at Mid Valley Exhibition Centre, 20-22 May 2004.**
23. **Malaysian Excellent Scientist Award 2004 by Ministry of Higher Education.**
24. **Japanese Society for the Promotion of Science (JSPS) Fellowship 2004**, Kyoto University.
25. **Sanggar Sanjung (Hall of Fame) Award 2005** from Universiti Sains Malaysia (12 February 2005).
26. **Gold medallist at the IENA 2005 International Trade Fair (Ideas-Inventions-New Products), Nuremberg, Germany, 3-6<sup>th</sup> November 2005.**
27. **Sanggar Sanjung (Hall of Fame) Award 2006** from Universiti Sains Malaysia (13 January 2006).
28. **Silver medallist National Award** at the 5<sup>th</sup> Malaysian Technology Expo (MTE 2006) at Putra World Trade Centre (PWTC), Kuala Lumpur, February 23-25, 2006.
29. **Excellent Service Award 2006 by Electron Microscopy Society of Malaysia.**
30. **USM Hadiah Sanjungan 2006** for Publication and Research Products.
31. **Gold medallist** at the **18<sup>th</sup> International Invention, Innovation, Industrial Design and Technology (ITEX 2007) Exhibition, at Kuala Lumpur Convention Center, 18-20 May 2007.**

32. **Gold Medal with Special Mention by Jury at the 56<sup>th</sup> World Exhibition of Innovation, Research and New Technologies at Brussels, Belgium, 22-25 November 2007.**
33. **USM Sanggar Sanjung (Hall of Fame) 2007 for 3 Categories**, Excellent Educator, Research Product and Publication.
34. **Gold medallist at the 19<sup>th</sup> International Invention, Innovation, Industrial Design and Technology (ITEX 2008) Exhibition, at Kuala Lumpur Convention Center, 9-11 May 2008.**
35. **Silver medal at the 20th International Invention, Innovation, Industrial Design and Technology (ITEX2009) Exhibition, at KLCC 15-17 May 2009.**
36. **USM Sanggar Sanjung Award (Hall of Fame) (2008)**, Publication Category.
37. **Silver Medal at Salon International Des Inventions, Geneve, Switzerland, 3 April 2009.**
38. **Silver Medal at Malaysian Association of Research Scientists(MARS)/Malaysia Technology Expo 2010**, Kuala Lumpur, 4-6 Feb. 2010.
39. **USM Sanggar Sanjung Award (Hall of Fame) (2009)**, Publication and Product Category.
40. **Gold Medal at Malaysian Invention and Design Society (MINDS)/ 21th International Invention, Innovation & Technology Exhibition (ITEX 2010)**, Kuala Lumpur, 14-16 May 2010.
41. **Gold Medal, Platinum Award and Best Invention (Russia) at British Invention Show 2010.**
42. **Gold Medal at Seoul International Invention Fair 2010**, Seoul, 2-5 Disember 2010.
43. **USM Sanggar Sanjung Award (Hall of Fame) (2010)**, Publication and Product Category.
44. **Gold Medal and Best Invention at Malaysian Invention and Design Society (MINDS)/ 22th International Invention, Innovation & Technology Exhibition (ITEX 2011)**, Kuala Lumpur, 20-22 May 2010.
45. **Gold Prize and FIRI Award for the Best Invention at Korea International Women's Invention Exposition (KIWIE 2011)**, Seoul Korea, 4-7 May 2011.
46. **Gold Medal and Grand Eco Prize at IENA 2011 International Trade Fair (Ideas-Inventions-New Products)**, Nuremberg, Germany, 27-30<sup>th</sup> October 2011.
47. **Gold Medal at BioMalaysia 2011**, Kuala Lumpur Convention Centre (KLCC), 21-13

November 2011.

48. **KIWIE Prize and Thailand Special Award at Korea International Women's Invention Exposition (KIWIE 2012)**, Seoul Korea, 3-6 May 2012.
49. **Silver Medal at 23th International Invention, Innovation & Technology Exhibition (ITEX 2012)**, Kuala Lumpur, 17-19 May 2012.
50. **Agricultural Invention Order of Merit at World Inventor Award Festival 2012 (WIAF)**, Seoul Korea, 15 December 2012.
51. **Gold Medal at Ekspo Rekacipta & Pameran Penyelidikan UniMAP 2013**, University Malaysia Perlis (UniMAP), 6 January 2013.
52. **Gold Medal at 24th International Invention, Innovation & Technology Exhibition (ITEX 2013)**, Kuala Lumpur, 9-11 May 2013.

### **Membership**

1. Member of The Plastic and Rubber Institute of Malaysia (PRIM)
2. Member of The Malaysian Counselling Association (PERKAMA).
3. Life Member of The Electron Microscopy Society Malaysia (EMSM).
4. Presiden Institute of Materials Malaysia (IMM) for Northern Region.
5. Felo Institute of Materials Malaysia (FIMM).
6. Member of the American Nano Society.
7. **Felo of Academy Science Malaysia (FASc)**

### 5. **List of Research Projects Completed and in Progress with dates:-**

#### **Research Projects Completed:**

1. Fabrication and Characterization of Advance Polymer Composites for Engineering Application – IRPA Sixth Malaysia Plan (Co-Researcher) Amount: RM 127,000
2. Synthesis and Application of Oil Palm Fatty Acid Additive in Rubber Compounding – Short Term IRPA. (Project Leader) Amount: RM 13,700
3. Dynamic Vulcanization Studies of Blends of ENR with PVC – Short Term IRPA (Co-Researcher) Amount: RM 17,500

4. Investigation the Potential Utilisation of Rubberwood powders in the Production Of Plastic Composites – Short Term IRPA (Co-Researcher). Amount: RM 17,300
5. Palm Oil Fatty Acid As A New Rubber Additive in Rubber Compounding IRPA Seventh Malaysian Plan. (Project Leader) Amount: RM 187,032
6. Development of Thermoplastic Elastomers Based on Polyvinylchloride/Epoxidised Natural Rubber Blends for Shoe Sole Formulations – IRPA Seventh Malaysian Plan (Co-Researcher). Amount: RM 151,966
7. The Effect of Compounding Techniques and the Addition of Additives on Mechanical Properties of Ternary Polymer System Based on PP/EPDM – Short Term IRPA (Co-Researcher). Amount:RM 18,429
8. Curing Characteristics and Properties of Rubber-Rubber Blends – Short Term IRPA (Co-Researcher). Amount:RM11,900
9. Carbon Black from Lignocellulosic Wastes and Tyre Scrap- Characterisation and Application as a Filler in Rubber Compounding – Short Term IRPA (Co-Researcher) Amount: RM 10,200.00
10. Thermoplastic Elastomer Composites Reinforced with Rubberwood Fibres and Powder – Short Term IRPA. (Project Leader)Amount: RM8, 000.00
11. Biodegradable LLDPE/Sago Starch Film – Grant from Sarawak Government. Amount: RM1 Million. (Co-Researcher)
12. Rice Husk Ash (RHA) based Thermoplastic Elastomer Composites (TPE's) –IRPA. Amount: RM 113,500.00. (Project Leader)
13. Development of A New Thermoplastic Elastomer (Material) Based on Epoxidised Natural Rubber for Manufacturing Automotive Components –Grant from Yayasan Felda. Amount: RM 200,000. (Project Leader)
14. New Technology for Recycling Various Scrap Rubbers-Short Term IRPA. Amount: RM 13,000.00 (Project Leader)
15. A New Compatibilizer or Coupling Agent Based on Palm Oil Fatty Acid for Plastic and Rubber Industries (New Chemical)- IRPA EA RM8. Amount: RM 209,500.00 (Project Leader).
16. Production of Carbon Black from Oil Palm Waste: Characterization and Applications in Rubber Compounding- IRPA EA RM8. Amount: RM 148,000.00 (Co-Researcher)
17. Study of Crosslinking Process of Protein in Natural Rubber Latex – IRPA EA RM8. Amount RM 248,000.00 (Co-Researcher).

18. Study of Crosslinking of Proteins in Natural Rubber Latex- FRGS. Amount: RM 83,500.00
19. Preparation and Study of Thermal Interface – INTEL Grant (Co-Researcher). Amount: RM49,000
20. Preparation and Properties of Polymer Clay Nanocomposites – ASEAN University Network South East Asia Engineering Education Development Network (AUN/SEED-Net). Amount RM21,176.00 (Project Leader).

**Research Projects in Progress:**

21. Utilization of Paper Sludge As Filler in Thermoplastic Composites – ScienceFund RM9. Amount: RM 202,193.00 (Project Leader).
22. Combined Effect of Organoclay and Carbon Black on Properties of Natural Rubber Nanocomposites - ASEAN University Network South East Asia Engineering Education Development Network (AUN/SEED-Net). Amount RM21, 176.00 (Project Leader).
23. Synthesis and Characterization of a Novel Degradable Elastomer- FRGS Grant. Amount: RM 60,000 (Project Leader)
24. Advanced Materials for Industrial Applications – Research University Grant. Amount: RM 867, 100.00 (Project Leader).
25. Development and Production of OilZob- A Novel and Reactive Oil Adsorbent from Various Rubber Wastes – MTDC (Malaysian Technology Development Corporation) Grant. Amount: RM1, 989,000 (Project Leader).
26. Development of New Thermoplastic Elastomers (TPEs) Based on Ethylene Vinyl Acetate (EVA) /Natural Rubber (SMR L) Blends – ScienceFund RM9. Amount: RM145, 972.00 (Project Leader)
27. Biodegradable Polymer Film Based on PVA and Tropical Fruit Waste Flour. RU Grant. Amount: RM 216,810.00 (Project Leader)
28. The Potential of Wollastonite as a New Filler for Natural Rubber Compounds , AUN / SEED – NET. Amount: RM 15,762.10 (Project Leader)
29. Study On Novel Oxo-biodegradable Soya Protein Based Polyethylene , KEMENTERIAN PENGAJIAN TINGGI. Amount: RM 45,580.00 (Project Leader)



30. Development and Characterization of Antimicrobial Natural Rubber Latex Based Foam Rubber Products using Nano Materials. RU Grant. Amount: RM171,000.00 (Project Leader)
31. Design & Performance. RU Cluster. Amount: RM1,093,000.00 (Project Leader)
32. Potential Of Oil Palm Ash As A New Filler In Natural Rubber Compounds. KEMENTERIAN SAINS, TEKNOLOGI DAN INOVASI (MOSTI). Amount: RM183,504.00 (Project Leader)
33. Development of New Material Based on Natural Rubber/ Recycled Ethylene Propylene Diene Rubber (NR/R-EPDM) Blends. KEMENTERIAN PENGAJIAN TINGGI. Amount: RM80,000.00 (Project Leader)
34. Fundamental Study on Bentonite as a New Filler in Ethylene Propylene Diene Monomer (EPDM): Study on the Vulcanization Kinetics and Reinforcement Mechanism. KEMENTERIAN PENGAJIAN TINGGI. Amount: RM57,050.00 (Project Leader)

6. **Publications** (*State all papers, books, chapters in books published based on research singly or jointly and completed and in progress*):-

**Refereed and International Journals**

1. **H. Ismail**, P. K. Freakley, R. H. Bradley, I. Sutherland & E. Sheng ' Modes of Action of a Multifunctional Additive in a Carbon Black Filled Natural Rubber Compound ' **Plastic Rubb. Comp. Proc. Appl.**, 23 (1995) 43-52 [U.K].
2. **H. Ismail**, P. K. Freakley, I. Sutherland & E. Sheng,' Effects of Multifunctional Additive on Mechanical Properties of Silica Filled Natural Rubber Compound '**Eur. Polym. Journal**. Vol. 31, No. 10, 1109 (1995) [U.K].
3. **H. Ismail**, P. K. Freakley, & E. Sheng, ' The Effect of Carbon Black Particle Size on Multifunctional Additive-Carbon-black Interaction' **Eur. Polym. Journal**. Vol. 31, No. 10, 1049 (1995). [U.K].
4. R. H. Bradley, E. Sheng, I. Sutherland, P. K. Freakley & **H. Ismail**, ' Interfacial Chemistry and Mechanical Effects of a Multifunctional Processing Additive on Carbon Black Filled Rubber. **J. Material Chem.**, 4(8), 1189- 1193 (1994).[U.K].

5. M. Z. Abidin, **H. Ismail**, G. A. W. Murray & P. K. Freakley, ' Effect of Multifunctional Additive on the Processing and Mechanical Properties of a Carbon Black Filled Natural Rubber Compound'. **Rubber World**, vol. 211, no.1, Oct., 30-36 (1994). [U.K]
6. E. Sheng, R. H. Bradley, I. Sutherland, P. K. Freakley & **H. Ismail**, ' Interfacial Effects of a Multifunctional Additive on Carbon Black Filled Rubber ' **Surf. Interface Anal.**, vol. 22, 491 - 496 (1994). [U.K].
7. **H. Ismail** and P. K. Freakley, ' Determination of the Modes of Action of A Cationic Surfactant For Property Development in Silica Filled Natural Rubber Compounds'. **Eur. Polym. Journal**. Vol. 32, No. 4, 411 (1996). [U.K]
8. **H. Ismail**, U. S. Ishiaku, R. H. Din and P. K. Freakley' Determination of the Modes of Action of A Cationic Surfactant For Property Development in Carbon Black Filled Natural Rubber Compounds'. **Polymer International**. 39(1996) 309-316 [U.K]
9. **H. Ismail** and P. K. Freakley ' The effect of A Cationic Surfactant on the Mechanical Properties of A Carbon Black Filled Solution Polymerised Styrene butadiene Rubber (SBR) with Peroxide Crosslinking System '. **Iranian J. Polym. Scien. Tech.**, Vol. 4, No. 4, 256 (1995). [IRAN]
10. **H. Ismail**, U. S. Ishiaku, Z. A. Mohd Ishak and P. K. Freakley ' The Effects of A Cationic Surfactant (Fatty Diamine) and A Commercial Coupling Agent on The Properties of A Silica -Filled Natural Rubber Compound'. **Eur. Polym. Journal**. Vol. 33, No. 1, 1 (1997). [U.K]
11. **H. Ismail**, U. S. Ishiaku, Z. A. Mohd Ishak and P. K. Freakley ' The Effect of A Diamine Salt of Fatty Acid in Carbon Black Filled Natural Rubber Compounds Using Random Mixing'. **Iranian J. Polym Scien. Tech**. Vol. 5, No.2, 97 (1996) [IRAN]
12. U. S. Ishiaku, Z. A. Mohd Ishak, **H. Ismail** & M. Nasir' The Effect of Di-2-ethylhexyl Phthalate Plasticizer on the Thermo- Oxidative Ageing Behaviour of Poly (Vinyl Chloride)/Epoxidized Natural Rubber Blends'. **Polymer International**. 41 (1996) 327-336 [U.K]
13. H. D. Rozman, R. N. Kumar, H. P. S. Abdul Khalil, A. Abusamah, P. P. Lim and **H. Ismail** ' Preparation and Properties of oil Palm Frond Composite on Methacrylic Silane and Glycidyl Methacrylate'. **Eur. Polym. Journal**. 33 (1997) 225-230 [U.K]
14. **Hanafi Ismail**, N. Rosnah & U. S. Ishiaku 'Oil Palm Fibre Reinforced Rubber Composites – Concentration Effect and Modification of Fibre Surface'. **Polymer International**. 43(1997) 223-230. [U.K]

15. **Hanafi Ismail**, N. Rosnah & H. D. Rozman ‘ Effects of Various Bonding Systems on Mechanical Properties of Oil Palm Fibre Reinforced Rubber Composites’.**Eur. Polym. Journal.** 33(1997) 1231-1238. [U.K]
16. **Hanafi Ismail**, N. Rosnah & H. D. Rozman ‘Curing Characteristics and Mechanical Properties of Short Oil Fibre Reinforced Rubber Composites’. **Polymer** 38 (1997) 4059-4064. [U.K]
17. **Hanafi Ismail** and Zulkifli Ahmad ‘Effects of Multifunctional Additive on Curing Characteristics and Mechanical Properties of Carbon Blacks (N330 and N220) Filled Natural Rubber Compounds’. **Iranian Polymer Journal**, Vol. 5, No. 3, 207 (1996) [IRAN]
18. U. S. Ishiaku, Z. A. Mohd Ishak & **H. Ismail** ‘The Effect of the ‘New’ ENR on the Thermo-Oxidative Ageing of PVC Based TPEs. **Kaut. Gummi Kaun.** 50 (1997)292. [GERMANY]
19. **Hanafi Ismail** and P. K. Freakley ‘The Effect of Multifunctional Additive on Filler Dispersion in Carbon Black and Silica Filled Natural Rubber Compounds’. **Polym. Plast. Technol. Eng.** 36(6) (1997) 873-889. [USA]
20. H. D. Rozman, R.N. Kumar, H. P. S. Abdul Khalil, A. Abusamah, R. Abu and **H. Ismail** ‘Fibre Activation With Glycidyl Metacrylate and Subsequent Copolymerization With Diallyl Phthalate ’ **European Polym. Journal.** 33 (1997) 1213-1218. [U.K]
21. **Hanafi Ismail**, U. S. Ishiaku, A. R. Arinab and Z. A. Mohd Ishak ‘ The Effect of Rice Husk Ash As A Filler in Epoxidised Natural Rubber Compounds ’ **Intern. J. Polym. Mater.** 36 (1997) 39-51. [USA]
22. **Hanafi Ismail**, U. S. Ishiaku, A. R. Arinab and Z. A. Mohd Ishak ‘Epoxidized Natural Rubber Compounds: Effect of Vulcanization System and Fillers ’ **Polym. Plast. Technol. Eng.** 37(1998) 467-479. [USA]
23. **Hanafi Ismail**, U. S. Ishiaku, A. A. Azhar and Z. A. Mohd Ishak ‘ The Comparative Study of The Effect of Thermo-Oxidative Ageing on Physical Properties of Rice Husk Ash and Commercial Fillers in Epoxidized Natural Rubber Compounds ’ **J. Elastomer & Plastics** 29(1997)270-289. [USA]
24. H. D. Rozman, **H. Ismail**, R. M. Jaffri, A. Aminullah and Z. A. Mohd Ishak ‘Mechanical Properties of Polyethylene-Oil Palm Empty Fruit Bunch Composites’ **Polym. Plast. Technol. Eng.** 37(1998) 493-505. [USA]

25. **Hanafi Ismail**, H. D. Rozman, R. M. Jaffri and Z. A. Mohd Ishak 'Oil Palm Wood Flour Reinforced Epoxidized Natural Rubber Composites: The Effect of Filler Content and Size' **Eur. Polym. J.** 33 (1997)1627-1632. [U.K]
26. H. D. Rozman, **H. Ismail**, R. M. Jaffri, A. Aminullah and Z. A. Mohd Ishak 'Polyethylene-Oil Palm Frond Composites - A Preliminary Study on Mechanical Properties' **Intern J. Polymeric Mater.** 39(1998) 161.[USA]
27. A. M. Sadequl, U. S. Ishiaku, **H. Ismail** and B. T. Poh 'The Effect of Accelerator/Sulphur Ratio on The Scorch Time of Epoxidised Natural Rubber'. **Eur. Polymer J.** 34(1998) 51-57. [U.K]
28. **Hanafi Ismail** and R.M. Jaffri 'Curing Characteristics and Mechanical Properties of Oil Palm Wood- Flour Reinforced Epoxidised Natural Rubber Composites" **Intern. J. Polymeric Mater.** 36 (1997) 241-254. [USA]
29. **Hanafi Ismail**, U. S. Ishiaku, E. S. Lu and Z. A. Mohd Ishak 'The Fatigue Behaviour of Filled Epoxidised Natural Rubber Compounds" **Intern. J. Polymeric Mater.** 38(1997) 275-289. [USA]
30. **Hanafi Ismail** and T. A. Ruhaizat 'Palm Oil Fatty Acid as an Activator in Natural Rubber Gum Compounds'. **Polym. Plast. Technol Eng.** 37 (1998) 481-492. [U.K]
31. U. S. Ishiaku, **H. Ismail**, A. Shaharum and Z. A. Mohd Ishak 'The Effect of An Epoxidised Plasticizer on The Thermo-Oxidative Ageing of Poly Vinyl Chloride/Epoxidised Natural Rubber Thermoplastic Elastomers'. **Polymer International.** 45(1998) 83-91. [U.K]
32. **Hanafi Ismail** and T. A. Ruhaizat 'Concentration Effect of Palm Oil Fatty Acid on Curing Characteristics and Mechanical Properties of Carbon Black Filled Natural Rubber Compounds'. **Intern. J. Polymeric Mater.** 38, (1997) 249-261. [USA]
33. **Hanafi Ismail** and T. A. Ruhaizat 'The Effect of Palm Oil Fatty Acid on Curing Characteristics and Mechanical Properties of Calcium Carbonate Filled Natural Rubber Compounds' **Iranian Polymer Journal**, 6(2) (1997) 97-104. [IRAN]
34. **Hanafi Ismail**, U. S. Ishiaku, E. S. Lu and Z. A. Mohd Ishak 'Fatigue and Hysteresis Behaviour of Filled Epoxidised Natural Rubber Compounds' **Intern. J. Polymeric Mater.** 39 (1998) 45-57. [USA]
35. **Hanafi Ismail** and H.H.Chia 'The Effects of Multifunctional Additive and Vulcanization Systems in Silica Filled Epoxidized Natural Rubber Compounds' **Eur. Polym. J.** 34(1998) 1857-1863. [U.K]

36. **Hanafi Ismail** and H.H. Chia ‘The Effects of Multifunctional Additive and Epoxidation in Silica Filled Epoxidized Natural Rubber Compounds’ **Polym. Test.** 17(1998) 199-210. [U.K]
37. **Hanafi Ismail**, I. Salmiah and Y. Tsukahara ‘Palm Oil Fatty Acid as an activator in carbon black filled natural rubber compounds: Effect of vulcanization system’ **Polymer International.** 44 (1997) 523-529. [U.K]
38. **Hanafi Ismail** and I. Salmiah ‘Palm Oil Fatty Acid as an activator in carbon black filled natural rubber Compounds: Effect of epoxidation’ **Intern. J. Polym. Mater.** 43 (1999) 115-125. [USA]
39. **Hanafi Ismail**, C.T. Ng, U.S. Ishiaku & Z.A. Mohd Ishak ‘A New Rubber Ingredient Based on Palm Oil Fatty Acid’ **Polym. Plast. Technology Eng.** 38(1999) 127-136 [USA].
40. Z.A. Mohd Ishak, **H. Ismail**, A. Aminullah and H.D. Rozman ‘The Effect of Silane Based Coupling Agents and Acrylic Acid Based Compatibilisers on the Mechanical Properties of Oil Palm Empty Fruit Bunch Filled High Density Polyethylene Composites’ **J. Appl. Polym. Sci.** 68(1998) 2189-2203. [USA]
41. **Hanafi Ismail** and C.T. Ng ‘Palm Oil Fatty Acid Additives (POFA’s) – Preparation and Application’ **J. Elastomer and Plastics.** 30(1998) 308-327. [USA]
42. **Hanafi Ismail** and C.T. Ng ‘The Effects of Palm Oil Fatty Acid Additive (POFA) and Commercial Processing Aids on the Properties of Carbon Black Filled Natural Rubber Compounds’’. **Int. J. Polymeric Material.** 40(1998) 105-114. [USA]
43. **Hanafi Ismail** ‘The Potential of Rubberwood as Filler in Epoxidized Natural Rubber Compounds’’. **Journal of Elastomers and Plastics.** 33 (2001) 34-46 [USA]
44. **Hanafi Ismail**, I.N. Hasliza and U.S. Ishiaku ‘The Effect of Oil Palm Wood Flour as a Filler in Natural Rubber Compounds’. **Kaut. Gummi Kunststoffe** 53 (2000) 24-29. [GERMANY]
45. **Hanafi Ismail** and I.N. Hasliza ‘The Effects of Bonding Agents on the Mechanical Properties of Oil Palm Empty Fruit Bunch Filled Natural Rubber Composites’ **Polym. Plast. Technology Eng.** 38(1999) 137-148. [USA]
46. **Hanafi Ismail** and I.N. Hasliza ‘Tensile Properties and Scanning Electron Microscopy Examination of the Fracture Surface of Oil Palm Wood – Flour Natural Rubber Composites’ **Iranian Polymer Journal.** 7(1) (1998) 53-58. [IRAN]

47. **Hanafi Ismail** and H.D. Rozman ‘Studies on the tensile properties of rubberwood fibre – natural rubber composites’. **Int. J. of Polymeric Material**. 41(1998) 325-333. [USA]
48. **Hanafi Ismail** and R.M. Jaffri ‘Physico-Mechanical Properties of Oil Palm Wood Flour Filled NR Composites’ **Polym. Test**. 18 (1999) 381-388. [U.K]
49. U.S.Ishiaku, **H. Ismail** and Z.A. Mohd Ishak ‘The Effect of Mixing Time on the Rheological, Mechanical and Morphological Properties of Poly(Vinyl Chloride)/Epoxidised Natural Rubber Blends’. **J. Appl. Polym. Sci**. 73 (1999) 75-83. [USA]
50. **Hanafi Ismail** and F.L. Chung ‘The Effect of partial replacement of silica by white rice husk ash in natural rubber composites’’. **Inter. J. Polym. Mater**. 43 (1999) 301-312. [USA]
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5. “**Time Management for An Excellent Student** “Published by Al-Kafilah Enterprise, Kota Bharu in 1998.
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7. “**Seven Challenges to Become An Excellent Student**” Published by Al Hidayah Publisher in 1999.
8. “**Student Problems- Question and Answer** “ Published by Al Hidayah Publisher in 2001 (with Sadali Othman)
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#### **Records of Supervision of Higher Degree Students:-**

<u>Name of Student</u>	<u>Degree</u>	<u>Date Completed</u>
1) Mariatti Jaafar @ Mustapha	M.Sc	Completed
2) Rosnah Nawang	M.Sc	Completed
3) Zulkifli Ahmad	M.Sc	Completed
4) Mohd Jaffri Razai	M.Sc	Completed
5) Susantha Siriwardena	Ph.D	Completed
6) Pham Thi Hao	Ph.D	Completed
7) Mariatti Jaafar @ Mustapha	Ph.D	Completed
8) Halimatuddahlia	M.Sc	Completed
9) Salmah	M.Sc	Completed
10) Navin Sharma	M.Sc	Completed
11) Suryadiansyah	M.Sc	Completed
12) Razif Muhammad Nordin	M.Sc	Completed

13) Zurina binti Mohamad	M.Sc	Completed
14) Woon Hon Wei	M.Sc	Completed
15) Supri A. Ghani	PhD	Completed
16) Salmah	PhD	Completed
17) Halimatuddahlia	PhD	Completed
18) Nadras Othman	PhD	Completed
19) Hakimah Osman	M.Sc	Completed
20) Nurul Kamal	M.Sc	Completed
21) Arjuliezan Rusli	M.Sc	Completed
22) Hosta Ardyananta	M.Sc	Completed
23) Siti Maznah Mohd Kabeeb	M.Sc	Completed
24) Nurazreena Ahmad	M.Sc	Completed
25) Sim Lim Chong	PhD	Completed
26) Zurina Binti Mohamad	PhD	Completed
27) Hakimah Osman	PhD	Completed
28) Yong Mun Kong	M.Sc	Completed
29) Sam Sung Ting	M.Sc	Completed
30) Suryadiansyah	PhD	Completed
31) Mohd Anuar Mat Junoh	M.Sc	Completed
32) Mohamad Awang	PhD	Completed
33) Abdul Malek Ya'acob	PhD	Completed
34) Abdullahi Ali Mohamed	PhD	Completed
35) Ong Woei Kheong	M.Sc (Mix Mode)	Completed
36) Rafiza Ramli	M.Sc (Mix Mode)	Completed
37) Foo Sook Har	M.Sc (Mix Mode)	Completed
38) Wang Xin Xiong	M.Sc (Mix Mode)	Completed
39) Nor Nadirah Najib	M.Sc (Mix Mode)	Completed
40) Nik Noriman Zulkepli	PhD	Completed



41) Cao Xuan Viet	M.Sc	Completed
42) Yamuna a/p Munusamy	PhD	Completed
43) Galpayage Dona Dalini Galpaya	M.Sc	Completed
44) Pooria Pasbakhsh	PhD	Completed
45) Raja Nazrul Hakim Raja Nazri	M.Sc	Completed
46) Rohani Abdul Majid	MSc	Completed
47) Razif Mohd Nordin	PhD	Completed
48) Sam Sung Ting	PhD	Completed
49) NorKhairunnisa Mazlan	PhD	Completed
50) Cao Xuan Viet	PhD	Completed
51) Shazlin Mohd Shaari	M.Sc (Mix Mode)	Completed
52) Yew Fang Wey	M.Sc	Completed
53) Siti Suhaida Idrus	M.Sc	Completed
54) Ahmad Faizal Ramly	M.Sc	Completed
55) Nur Azleen Azahari	M.Sc	Completed
56) Norjulia Ahmad Mahir	M.Sc	Completed
57) Nurul Farhana Omar	M.Sc	Completed
58) Ragunathan a/l Santiago	PhD	Completed
59) Abdul Hamid Abdullah	M.Sc	Completed
60) Mohamad Kahar Ab Wahab	PhD	Completed
61) Ooi Zhong Xian	M.Sc	Completed
62) Nabil Hayeemasae	M.Sc	Completed
63) Siti Zuliana Salleh	M.Sc	Completed
64) Shazlin Mohd Shaari	PhD	Jun 2013
65) Khoo Wee Shen	M.Sc	Completed
66) Zuriaty Zainal	M.Sc	June 2013
68) Maryam Irani Hassan	PhD	July 2013
69) Nor Fasihah Zaaba	M.Sc	Completed

70) Mathialagan a/l Muniyadi	PhD	Mac 2014
71) Komethi a/p Muniandy	M.Sc	Completed
72) Indrajit Rathnaya	PhD	Jun 2014
73) Norshahida Sharifuddin	PhD	July 2014
74) Fairus Mazlia	M.Sc	Jan 2014
75) Sarah Ishak	M.Sc	Dis 2013
76) Pang Ai Ling	M.Sc	Dis 2013
77) Nurshamila Saari	M.Sc	Dis 2013
78) Nabil Hayeemasae	PhD	Jun 2014
79) Nor Fasihah Zaaba	PhD	Jun 2015
80) Ooi Zhong Xian	PhD	Jan 2015
81) Hazwani Syaza Ahmad@ Sofa	PhD	Mac 2015
82) Rohani Abdul Majid	PhD	Mac 2015
83) Shamala a/p Ramasamy	MSc	Jan 2014
84) Indra Surya	PhD	Mac 2015
85) Hoang Thi Bich Diep	MSc	Completed
86) Siti Zuliana Salleh	PhD	Jun 2015

8. **Records of Papers presented at Conferences/Seminars/Workshops locally or overseas:-**

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- 293.**H. Ismail** “Recycling of Various Rubber Wastes”. **International Conference and Exhibition on Green Chemistry, Malaysian Chemical Congress 2006 (MCC2006)**, 19-21 September 2006, Sunway Pyramid Convention Centre, Petaling Jaya, Malaysia. **[INVITED SPEAKER]**
- 294.**H. Ismail** and R. Ramli “OrganoClay Filled Natural Rubber Nanocomposites: The Effects of Filler Loading and Mixing Methods”. **9<sup>th</sup> Field Wise Seminar ASEAN University Network South East Asia Engineering Education Development Network (AUN/SEED-Net)**, 8-9 January 2007, Ho Chi Minh, Vietnam. **[Invited Speaker]**
- 295.**H. Ismail**, M. Awang and H.M. Akil “New Thermoplastic Elastomers (TPE) Based on Polypropylene and Waste Tire Dust (WTD)”. **10<sup>th</sup> Field Wise Seminar ASEAN University Network South East Asia Engineering Education Development Network (AUN/SEED-Net)**, 5-6 June 2007, Penang, Malaysia. **[Invited Speaker]**
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491. S. Ishak, **H. Ismail**, and A.H. Zuratul Ain, 2012, Curing and tensile properties of talc and mica filled EPDM composites. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 90.
492. W.S. Khoo, **H. Ismail**, and A. Ariffin, 2012, Tensile and oxidative degradation properties of polyvinyl alcohol/chitosan/polyethylene glycol blend. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 92.
493. H. Nabil, **H. Ismail**, and A.R. Azura, 2012, Cure characteristics, tensile properties and morphology of natural rubber/recycled ethylene-propylene-diene-rubber blends. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 103.
494. H. Nabil, **H. Ismail**, and A.R. Azura, 2012, Influence of blend ratio on swelling behavior and thermogravimetric analysis of NR/waste EPDM blends. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 104.
495. M. Mathialagan and **H. Ismail**, 2012, Silica or calcium carbonate replacement with bentonite as filler in EPDM compound: Effect on the curing, tensile and morphological properties. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 105.
496. N.S. Suharty, **H. Ismail**, B. Wirjosentono, M. Firdaus, and G.K. Wardani, 2012, Mechanical properties and biodegradability of rice husk powder filled polypropylene composites with and without crude palm oil (CPO) plasticizer. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 107.

497. W.G.I.U. Rathnayake, **H. Ismail**, A. Baharin, A.G.N.D. Darsanasiri and S. Rajapakse, 2012, Antimicrobial activities of various colors of silver nanoparticles. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 109.
498. N.H.H. Shuhaimi, N.Othman, **H. Ismail** and S. Sasidharan, 2012, A review: Natural antioxidant as an alternative to synthetic antioxidant. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 11.
499. F.M. Mat Suki, **H. Ismail**, and Z.A. Abdul Hamid, 2012, Preparation and properties of polyvinyl alcohol/banana frond flour biodegradable film. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 118.
500. Z.X. Ooi, **H. Ismail**, A. Abu Bakar, and N.A. Abdul Aziz, 2012, Study on the effect of hexamthylenetetramine on natural weathering of polyvinyl alcohol filled rambutan skin waste flour film. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 119.
501. S.T.AbdulQader, I.Ab Rahman, **H. Ismail**, T.P. Kannan, and Z. Mahmood, 2012, Synthesis of porous biphasic calcium phosphate scaffold appropriate for dental regeneration. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 124.
502. S.T. Sam, **H. Ismail**, and Z. Ahmad, 2012, Analysis on degradation of oxo-biodegradable LLDPE/soya powder blends under natural weathering. **Asian International Conference on Materials, Minerals, and Polymer (MAMIP 2012)**, Vistana Hotel, Penang, 125.
503. **Hanafi Ismail**, Sam Sung Ting, 2012, Preparation and properties of degradable and green linear low density polyethylene (LLDPE)/soya powder blends. **The 10th International Conference on Mining, Materials and Petroleum Engineering: Sciences and Technologies towards 2012**, Songkhla, Thailand, 2 [**Invited Speaker**].
504. H. Nabil, **H. Ismail**, and A.R. Azura, 2012, Thermo-oxidative ageing of crosslinked NR/waste-EPDM blends. **The 10th International Conference on Mining, Materials and Petroleum Engineering: Sciences and Technologies towards 2012**, Songkhla, Thailand, 3.
505. M. Mathilagan and **H. Ismail**, 2012, Effect of 3-aminopropyltriethoxysilane (APTES) content on the curing, tensile and morphological properties of bentonite filled ethylene

- propylene diene monomer (EPDM) composite. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 6.
506. H. Diep, **H. Ismail**, N. Vantu, Tsutomu, 2012, The effect of filler loading and ball mill physical treatment on tensile properties and morphology of wallastonite filled natural rubber compounds. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 63.
507. F.M. Mat Suki, **H. Ismail**, and Z.A. Abdul Hamid, 2012, Crosslinked poly(vinyl alcohol) and soya bean flour blend films: Tensile properties, water absorption and water vapour transmission rate. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 64.
508. S.M. Shaari, **H. Ismail**, N. Othman, 2012, Outdoor weathering of chitosan-filled epoxidized natural rubber compounds. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 68.
509. N.S. Balakrishna, **H. Ismail**, N. Othman, 2012, The effects of an acrylic acid compatibilizer on the mechanical properties and morphological study of rattan powder-filled polypropylene composites. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 70.
510. P.A. Ling, **H. Ismail**, 2012, Tensile properties and morphological studies of polypropylene/waste tire dust/kenaf (PP/WTD/KNF) composites: The effects of KNF loading and phthalic anyhydride (PA). **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 71.
511. S. Ishak, **H. Ismail**, and Z.A.A. Hamid, 2012, Influence of blend ratio on cure characteristics, tensile properties and morphology of mica filled EPDM/R-EPDM blends. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 76.
512. S.S. Ting, L.H. Ibrahim, N.Z. Zulkepli, **H. Ismail**, 2012, The effect of electron beam irradiation on PE-g-MA compatibilised linear low-density polyethylene/soya powder blends. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 87.
513. N.H.H. Suhaimi, N. Othman, **H. Ismail**, S.Sasidharan, 2012, The effect of vulcanization systems on fatigue and compression set for vulcanized rubber in the presence of natural and commercial antioxidants. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 93.

514. N. Sarifuddin, **H. Ismail**, Z. Ahmad, 2012, Effect of natural weathering on mechanical and morphological properties of low density polyethylene (LDPE)/thermoplastic sago starch (TPSS)/kenaf core fiber (KCF) composites. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 96.
515. I. Surya, **H. Ismail**, A.R. Azura, 2012, The effect of alkanolamide on silica reinforcement of natural rubber compounds. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 98.
516. W.G.I.U. Rathnayake, **H. Ismail**, A.Naharin, I.M.C.C.D. Bandara, S. Rajapakse, 2012, Antibacterial activities of silver nano particles incorporated potassium oleat soap. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 103.
517. S. Ramasamy, H. Ismail, Y. Munusamy, 2012, Mechanical and physical behavior of rice husk powder filled natural rubber latex foam. National Symposium on Polymeric Materials 2012 (NSPM 2012), SERC Universiti Sains Malaysia, 104.
518. N.Z. Nik Yahya, N.Z. Noriman, **H. Ismail**, 2012, The effects of different particle sizes of recycled catheter and morphology of ENR-50/recycled catheter blends. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 106.
519. J.N.M. Ridhwan, N.Z. Noriman, **H. Ismail**, 2012, The effects of silane coupling agent, different particle sizes of filler and its blend ratios on tensile properties and morphological properties of SMR L/"Batu Reput" filler vulcanizate. **National Symposium on Polymeric Materials 2012 (NSPM 2012)**, SERC Universiti Sains Malaysia, 107.
520. S.M. Manshor, C.T.Ratnam, **H. Ismail**, 2012, Electron beam crosslinking of PVC/ENR/CNTS nanocomposites in the presence of trimethylol propane triacrylate, TMPTA. National Symposium on Polymeric Materials 2012 (NSPM 2012), SERC Universiti Sains Malaysia, 108.
521. **H. Ismail**, S.Z. Salleh, P. Pasbakhsh and A.F. Mohd Nor, 2012, Natural rubber and ethylene propylene diene monomer (EPDM) nanocomposites: The effect of Halloysite nanotubes (HNTs) as a new filler. **Proceeding of International Conference on Physics and Applications (ICOPIA 2012)**, Solo, Indonesia, 11 [Invited Speaker].
522. N. Sarifuddin, **H. Ismail**, Z. Ahmad, 2012, Effect of natural weathering on mechanical and morphological properties of low density polyethylene (LDPE)/thermoplastic sago

- starch (TPSS)/kenaf core fiber (KCF) composites. **Proceeding of International Conference on Physics and Applications (ICOPIA 2012)**, Solo, Indonesia, 100.
523. W.G.I.U. Rathnayake, **H. Ismail**, A. Baharin, A.G.N.D. Darsanasiri and S. Rajapakse, 2012, Synthesis, characterization and antimicrobial activities of ZnO nanoparticles incorporated natural rubber latex foam. **8th International Conference Materials Technology and Exhibition**, Kuala Lumpur, 68.
524. M. Irani, H. Ismail, 2012, Preparation of waste polystyrene-g-aryclic acid-co-chitosan superabsorbent hydrogel. **8th International Conference Materials Technology and Exhibition**, Kuala Lumpur, 141.
525. **H. Ismail**, A.Hamid Abdullah, and A. Abu Bakar, 2012, Tensile properties, water absorption, and thermal stability of (high density polyethylene)/(soya powder)/(kenaf core) composites. **Asian Workshop on Polymer Processing 2012**, Kyoto, Japan, 128.
- 526.S.T. Sam, N.Z. Noriman, **H. Ismail**, 2013, Outdoor weathering on the tensile properties and morphology of ENR 50 compatibilised LLDPE/soya spent powder blends, **4th International conference for young chemist 2013**, Bayview Hotel, Georgetown, Penang, Malaysia, Bayview Hotel, Georgetown, Penang, Malaysia, 207.
- 527.H.S. Ahmad, **H. Ismail**, A. Abd Rashid, 2013, Fatigue, Resilience, Hardness, and swelling behaviour of natural rubber and recycled acrylonitrile-butadiene rubber (NR/NBRr) blends, **4th International conference for young chemist 2013**, Bayview Hotel, Georgetown, Penang, Malaysia, Bayview Hotel, Georgetown, Penang, Malaysia, 212.
- 528.R. Abdul Majid, **H. Ismail**, R. Mat Taib, 2013, Effects of filler loading on water absorption & swelling properties of PVC/ENR/kenaf powder composites, **4th International conference for young chemist 2013**, Bayview Hotel, Georgetown, Penang, Malaysia, Bayview Hotel, Georgetown, Penang, Malaysia, 212.
- 529.**H. Ismail**, S.Z. Salleh, P. Pasbakhsh, A.F. Mohd Nor, 2013, The effect of halloysite nanotubes (HNTs) as a new filler in ethylene-propylene-diene rubber and natural rubber nanocomposites, **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 43. **[INVITED SPEAKER]**.
- 530.S.T. Sam, **H. Ismail**, S. Ragunathan, N. Z. Noriman, 2013, Curing, Tensile and Magnetic Properties of waste nickel zinc ferrite filled SMR L/SBR composites, **The 1st Asia**

- Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 139.
531. zhong xian Ooi, **Hanafi Ismail**, Azhar Abu Bakar, 2013, Dynamic mechanical properties and tensile behavior of oil palm ash filled natural rubber vulcanizates, **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 144.
532. N.H.H. Shuhaimi, N. Othman, **H. Ismail**, S. Sasidharan, 2013, Comparative study on natural and synthetic antioxidants on thermo-oxidative aging of natural and synthetic rubber compound, **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 145.
533. H. Nabil, **H. Ismail**, A.R Azura, 2013, Comparison of thermal stability of sulphur, peroxide, and EB irradiation cured NR compounds containing ground EPDM waste, **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 150.
534. W.G.I.U. Rathnayake, **H. Ismail**, A. Baharin, Channa R. De. Silva, A.G.N.D. Darsanasiri, 2013, Imparting antimicrobial activities to natural rubber latex foam by Ag doped TiO<sub>2</sub> nanoparticles, **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 155.
535. M. Muniyadi, **H. Ismail**, 2013, Curing, Tensile and morphological properties of treated bentonite filled EPDM composite, **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 162.
536. M.R.J. Nasir, N.N. Zulkepli, **H. Ismail**, R. Hamzah, 2013, The effects of different particles sizes of recycled acrylonitrile-butadiene rubber and its blend ratios on tensile and morphological properties of vNBR/NBRr blends, **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 82.
537. N.Z.N. Yahya, N.N Zulkepli, **H. Ismail**, S.S. Ting, 2013, Natural rubber/Styrene butadiene rubber/recycled nitrile glove (NR/SBR/rNBRg) Ternary blend: tensile properties and morphology, **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, 85.



9. **Invited/ Keynote/ Plenary Speaker:-**

1. Invited Speaker for “**Plastic Rubber Institute Malaysia (PRIM) Seminar 2002**”, Kuala Lumpur, March 30<sup>th</sup>, 2002. (Presentation title: Application of White Rice Husk Ash in Thermoplastic Elastomer Composites)
2. Invited Speaker for “**Seminar Nasional Teknik Kimia 2003**”, Organised by Program Studi Teknik Kimia”, Fakultas Teknik, Universitas Sumatera Utara, Medan, Indonesia, 30 August 2003.
3. Invited Speaker for “**International Symposium “Global Renaissance by Green Energy Revolution”**” Organised by Nagaoka University of Technology/Universiti Sains Malaysia, 8-9 August, 2005, Park Royal Hotel, Penang, Malaysia.
4. Invited Speaker for **International Conference and Exhibition on Green Chemistry** Organised by Insitut Kimia Malaysia (IKM), Federation of Asian Chemical Societies and Ministry of Science, Technology and Innovation, Sunway Pyramid Convention Centre, Petaling Jaya, Selangor, 19-21 September 2006.
5. Invited Speaker for **A Short Course on Polymeric Materials: Recent Development and Applications**, Organised by School Of Materials and Mineral Resources Engineering, Plastics and Rubber Institute Malaysia (Northern Region) and Institute of Materials Malaysia (Northern Region), USM, Nibong Tebal, Penang, 13-14 February 2006.
6. Invited Speaker for **ASEAN University Network/Southeast Asia Engineering Education Development Network (AUN/SEED-NET) International Seminar “Nanomaterials and Nanocomposites: Processing and Performance”**, Organised by Ho Chi Minh University of Technology, Vietnam January 8-9, 2007.
7. Invited Speaker for **ASEAN University Network/Southeast Asia Engineering Education Development Network (AUN/SEED-NET) International Seminar “Engineering Materials: Current Advances & Potential Applications”**, Organised by Universiti Sains Malaysia, Penang, June 5-6, 2007.
8. Invited Speaker for **International Conference on Mining, Materials and Petroleum Engineering: The Frontiers of Technology (ICFT 2007)”**. 10-12 May 2007, Phuket, Thailand.

9. Invited Speaker for **11<sup>th</sup> Field Wise Seminar ASEAN University Network South East Asia Engineering Education Development Network (AUN/SEED-Net)**, 15-16 Nov 2007, Vientiane, Laos.
10. Keynote Speaker for **9<sup>th</sup> National Symposium on Polymeric Materials (NSPM 2009)**, Dec. 14-16<sup>th</sup>, 2009, Residence Hotel, Uniten, PutraJaya.
11. Keynote Speaker for **9<sup>th</sup> International Seminar on Polymer Science and Technology**, 17-21 October 2009, Iran Polymer and Petrochemical Institute, Tehran, Iran.
12. Keynote Speaker for **International Seminar Chemistry and Polymer 2009**, 18-20 May 2009, Medan, Indonesia.
13. Invited Speaker for **Rubber Compounding Asia 2010**, 2-3 March 2010, Bangkok, Thailand.
14. Invited Speaker for **NASCON 2010**, 3-5 April 2010, Grand Riverview Hotel, Kota Bahru.
15. Invited Speaker for **IMTCE 2010**, 13-16 June 2010, Hilton Hotel, Kuching.
16. Keynote Speaker for **10th National Symposium on Polymeric Materials**, 8-10 November. Awana Porto Malai Hotel, Langkawi.
17. Keynote Speaker for **The 1st International Seminar on Fundamental and Application of Chemical Engineering**, 3-4 November 2010. Bali-Indonesia.
18. Keynote Speaker for **The International Conference on Materials Processing Technology**, 2-3 June, 2011, Movenpick Resot & Spa Karon Beach Phuket, Phuket.
19. Invited Speaker for **USU International Science and Technology Exhibition & Seminar**, 12-13 July 2011, Tiara Convention Centre, Medan, Indonesia.
20. Invited Speaker for **The 10th International Conference on Mining, Materials and Petroleum Engineering: Sciences and Technologies towards 2012**, Songkhla, Thailand.
21. Invited Speaker for **Proceeding of International Conference on Physics and Applications (ICOPIA 2012)**, Solo, Indonesia.
22. Keynote Speaker for **Brunei International Conference on Engineering and Technology 2012**, Institut Teknologi Brunei, Brunei.
23. Invited Speaker for **The 1st Asia Pacific Rubber Conference (APRC 2013)**, Diamond Plaza Hotel, Surat Thani, Thailand, Diamond Plaza Hotel, Surat Thani, Thailand.

10. **Records of consultancy services with dates:-**

- (1) Technical Advisor to Aseania FoilPack Sdn Bhd. (1996-present)

- (2) Research Project to Sabutek (M) Sdn Bhd (with Dr Zainal Ariffin and Dr Rozman) (1996-1998)
- (3) Research Project to Land Custody and Development Authority (PELITA) ( Head by Prof. Azemi ) (1997-present)
- (4) Research Project to Principal Win (M) Sdn Bhd through final year research project by Ragvinder Singh Jessy (session 1997/98).
- (5) Technical Advisor to Viking-Askim Sdn Bhd (1996-present)
- (6) Teaching Diploma of Plastics and Rubber Institute of Malaysia (DPRIM) since 1995 organised by The Plastics and Rubber Institute of Malaysia (PRIM).
- (7) Member of National Working Group Committee for “Method of Test for Vulcanised Rubber” (1997-present)
- (8) Consultant for Development Project of Materials Processing, Characterization and Testing Labs for **Petronas University of Technology**, Perak, Malaysia.
- (9) Technical Advisor to Power Choice Sdn. Bhd (1999-present)
- (10) Technical Advisor to Plaat Malaysia Sdn Bhd (2000-present)

11. **Record of University Service with dates:-**

**Editing, Refereeing /Reviewer and Internal Examiner Activities**

1. **Examiner M.Sc thesis** (USM) “ Curing Characteristics and Properties of Epoxidised Natural Rubber” (1997)
2. **Examiner for conversation from M.Sc to Ph.D** (USM) (1997)  
“Structure-Processing-Property Relationship in PVC/ENR Thermoplastic Elastomer”
3. **Editor** for ‘Laboratory Safety Book’ School of Industrial Technology, USM, Penang.
4. **Examiner for conversion from M.Sc to Ph.D** (USM), (1997)  
“Biodegradable Polyethylene-Sago Starch Blend”

5. Referee for USM Vice Cancellor Debate Cup Inter Hostel Session 1998/99.
6. Examiner **M.Sc thesis** (USM) “Silica Reinforcement for Styrene Butadiene and Epoxidised Natural Rubbers Using Sol-Gel Silica” (1999)
7. Examiner **Ph.D thesis** (USM) “Rheological and Mechanical Properties of Dynamically Vulcanised Poly(Vinyl Chloride)/Epoxidized Natural Rubber Thermoplastic Elastomer” (1999)
8. Examiner **M.Sc thesis** (USM) “Study on Continuous Fibre Thermoplastic Prepregs by Pultrusion Process” (2000)
9. Examiner **M.Sc thesis** (USM) “ Chemical Modification of Natural Rubber and Composite Preparation with Titanium Alkoxide and Aluminum Alkoxide Using Sol-Gel Process” (2000)
10. Examiner **Ph.D thesis** (USM) “ Crystallisation and Morphology of Semi-Crystalline Polymer Blends Comprising Poly(Tetramethylene Succinate) in Poly (E-Caprolactone) and in Poly (Ethylene Terephthalate)” (2002)
11. Examiner **Ph.D thesis** (USM) “ The synthesis of Phenoxy Ethyl Vinyl Ether Grafted Polypropylene and its Effect on the Compatibilisation of PP/PS Blends” (2003)
12. Examiner **M.Sc thesis** (USM) “Studies on the Processing and Properties of Conductive Single Fillers and Hybrid Fillers Filled Silicone Elastomer Composites” (2011)

**Committee Membership (University):**

1. Organizing Committee Member for “ **Tropical College 95** On Advances and Status in Polymer Technology” – Organised by USM, MPMA-PTTL and Penang State Government, 4-6 Dec. 1995, USM, Penang.

2. Table tennis committee chairman of 23<sup>th</sup> Malaysian Universities Staff Games At Universiti Sains Malaysia (USM), from 1-4 May 1997.
3. Chairman of Safety Committee School of Industrial Technology, USM.
4. Task force member for Work Culture, under TQM PPTI.
5. Member of Student Advisor Panel Committee PPTI
6. Chairman for USM Table Tennis Club.
7. Ad hoc Committee member for PPTI 7<sup>th</sup> Malaysian Plan
8. Advisor for USM Kelantanese Student Association (HAAK)
9. Organizing Committee (Chairman) for **1<sup>st</sup> Colloquium on Potential Utilization of Starch & Lignocellulosic Material For Value Added Application**. Conference Hall, School of Industrial Technology,USM, 29 Nov. 1997.
10. **Committee Member** for PPTI, “Istilah and Perkamusan” Committee.
11. Task Force Member for ISO 9000 USM.
12. PPTI representative for USM Publications Committee.
13. Chairman for the paper sub-committee for ‘**Regional Conference on Polymeric Materials 1998, RCPM’98**, Conference Hall, School of Industrial Technology, USM, 10-11 Nov. 1998.
14. Chairman for PPTI “Sport and Welfare Club”
15. Organizing Committee (Chairman) for **2<sup>nd</sup> Colloquium on Potential Utilization Of Starch & Lignocellulosic Material For Value Added Application**. Conference Hall, School of Industrial Technology,USM, 29 Nov. 1999.
16. Manager and player for USM Table Tennis Team in “**Malaysian Universities Staff Games**” at Universiti Teknologi Malaysia, Skudai, Johor from May 5-9 1999.
17. Manager and player for USM Table Tennis Team in **MAKSAK Penang** from 29/6-3/7/99.
18. Manager and player for USM Table Tennis Team in “**Malaysian Universities Staff Games**” At Universiti Utara Malaysia, Sintok, Kedah from 21-23/4/2000.

19. Manager and player for USM Table Tennis Team in **MAKSAK Penang** from 1-3 July 2000.
20. Organizing Committee Member for “**Tropical College on Polymer Science and Technology**”, Organised by Penang State Government and USM, 7-8 Nov. 2000, USM, Penang.
21. USM Publication AdHoc Committee Member
22. Organizing Committee member for “**USM-JIRCAS Joint International Symposium**”, 20-22 Mac 2001, Paradise Sandy Bay Hotel, Penang.
23. Manager and player for USM Table Tennis Team in “**Malaysian Universities Staff Games**” At Universiti Teknologi Mara, Shah Alam, from 9-11/5/2001.
24. Manager and player for USM Table Tennis Team in “**Malaysian Universities Staff Games**” At Universiti Islam Antarabangsa, Gombak, from 12-16/6/2002.
25. Organizing Committee member for **3<sup>rd</sup> International Conference on Recent Advances in Materials, Minerals and Environment 2003**, 20-23 Oct. 2003. Penang, Malaysia.
26. Organizing Committee member for **3<sup>rd</sup> USM-JIRCAS Joint International Symposium**, 9-11 March. 2004, Penang, Malaysia.
27. Panel of Jury in Conjunction with **Expo Science, Technology & Innovation 2004**, 27-29 August 2004, Putra World Centre, (PWTC), Kuala Lumpur.
28. Panel of Jury in Conjunction with **IPTA R & D EXPO 2005**, 30 September – 2 October 2005, Putra World Centre, (PWTC), Kuala Lumpur.
29. Chairman of Session for “**Regional Workshop on Education for Sustainable Development**” Organised by United Nations University (UNU) and Universiti Sains Malaysia, 10-13<sup>th</sup> April 2005, Penang, Malaysia.
30. Organizing Committee (Chairman) for **A Short Course on Polymeric Materials: Recent Development and Applications**, Organised by School Of Materials and Mineral Resources Engineering, Plastics and Rubber Institute Malaysia (Northern Region) and Institute of Materials Malaysia (Northern Region), USM, Nibong Tebal, Penang, 13-14 February 2006.

31. **USM Academic Planning Committee (JPA)** from 2004-2006.
32. **Chief Evaluator** for USM ScienceFund Research Application under Engineering and Technology Research Platform.
33. **Chairman for USM Engineering Campus Teaching Time Table Committee** (Since 2007).

#### **Short Course/Workshop**

1. ' **How to manage your time?**' Lecture given at **Mini Workshop** School of Industrial Technology for Probation Student(P1), 5 August 1995, USM.
2. ' **Effective Study to Become an Excellent Student**'- Talk given at STPM Motivation Camp Organised by Majlis Desasiswa Fajar-Damai, USM, 8-10 Mac 1996.
3. ' Effective Study Strategy to Become An Excellent Student'- **Study Workshop** Shool of Industrial Technology, USM, 13 January 1996.
4. ' **Self Challenge for An Excellent Student** ' Talk given at **Study Workshop 1**, for First Year Polymer and Food Technology Students, Semester 1 1996/97, School of Industrial Technology, USM, 13 July 1996.
5. ' **Self Challenge for An Excellent Student**' Talk given at **Study Workshop 1**, for First Year Quality Control & Instrumentation and Wood, Paper and Coating Technology Students, Semester 1 1996/97, School of Industrial Technology, USM, 13 July 1996.
6. ' **How to Become an effective Time Manager?**' Talk given at **Study Workshop 2**, for PPTI student School of Industrial Technology( PPTI), 1996/97 Session, 3 Ogos 1996.
7. ' **7 Challenges to Become An Excellent Students**' Open Talk to all USM Students organised by USM Kelantanese Student Association (HAAK), on 14 Sept. 1996, DK U,USM.
8. ' **How to manage your time effectively**'. Talk given in the Workshop Study organised by School of Industrial Technology, Semester 2, 3 Januari 1997.

9. ‘ **Strategy to face an examination**’. Talk given in the Motivation Workshop organised by Student Councelling Panel under Mentor Committee School of Industrial Technology on 7 Mac 1997.
10. **“You also will become an excellent student”**. Motivation talk to Probation Students (P1, P2 and P3) PPTI at Conference Room, PPTI, USM, 21 Jun 1997.
11. **‘Study habit and learning style for excellence’**, Motivation talk given to Matriculation Express Student 1997/98 Session organised by Matriculation School on 10 Mei 1997 at Lecture Theatre S.
12. **‘The Importance of Safe Aspect in the Laboratory”** Talk given to PPTI students on 31 Oct. 1997 at lecture Theatre W, USM.
13. **‘Time is the most valuable asset given by God’**. Work Culture Talk to Supporting Staff School of Industrial Technology (USM) on 13 December 1997.
14. ‘ **Success Psychology – Five Steps for Self Excellence**’. Talk given in the Motivation Workshop at School of Computer Science–Organised by Mentor Committee School of Computer Science, USM on 10 January 1998.
15. **“The Importance of Safe Aspect in the Laboratory”**. Talk given to PPTI first year students on 23 May 1998 at lecture Theatre G, USM.
16. **“To Become an Excellent Student at Universiti Sains Malaysia”**. Talk given to PPTI first year student on 29 May 1998, Lecture Theatre W, USM.
17. **“Short Term Strategy to face Examination”** Talk given in the Motivation Workshop II, organized by PPTI Counseling Panel for Probation Students (P1, P2 and P3) on 9 January 1999.
18. “How to generate Academic Excellence in USM” **Talk given** to First Year student of PPTI, Academic Session 1999/2000 on May 21, USM. Speaker for **“Motivation Course”** at PPTI Conference Room for probation students on 8 July 2000.
19. Speaker for **“Smart Partnership and Self Development Course”** organized by PPTI Counseling Panel on 25 November 2000 at Desa Kembara, USM. Speaker for **“Jejak**



Bistari 2001/2” organized by Desasiswa Cahaya Permai, USM on 2 February 2002 at Desasiswa Cahaya.

20. Main Speaker for “ Fizik Formula 4” organized by School of Science Physics, USM , on July 31, 2004 at Desa Kembara, USM.
21. Speaker for “Bengkel Pemantapan Kualiti Pelajar” organized by Mimates, School Materials and Mineral Resources Engineering, USM, on July 10, 2004 at Lecture 1 Hall 9, USM.

12. **Record of National/International Service with dates:-**

**Committee Membership (outside):**

1. Represent USM as a member of National Working Group Committee for “ Method Of Test for Vulcanised Rubber” chaired by Malaysian Rubber Board.
2. Working Group (WG) for the development of Malaysian Standards on Terminology for Rubber and Rubber Products Chaired by Malaysian Rubber Board.
3. Organizing Committee (Chairman) for **14<sup>th</sup> Scientific Conference and 15<sup>th</sup> Annual General Meeting of Electron Microscopy Society of Malaysia**,. 5-7<sup>th</sup> December 2005, Penang.
4. Advisors for **International Conference on Advanced Materials (CAM 2005)** Organised by Institute of Advanced Technology, Universiti Putra Malaysia, IOI Marriot Hotel, Putrajaya, 6-8 December 2005.
5. Steering Committee for **International Conference and Exhibition on Green Chemistry** Organised by Insitut Kimia Malaysia (IKM), Federation of Asian Chemical Societies and Ministry of Science, Technology and Innovation, Sunway Pyramid Convention Centre, Petaling Jaya, Selangor, 19-21 September 2006.
6. **Penilaian Tahap Kecekapan (TK3) Lecture** to Universiti Malaysia Perlis (UniMAP) Lecturers under Topics Scientific Writing and Publication at UniMAP on 27 November 2006.

7. International Advisor of the **International Conference of Sustainable Materials (ICoSM 2007)** Organised by Universiti Malaysia Perlis (UniMAP) at Park Royal, Penang from 9-11 June 2007. Universiti Sains Malaysia (USM)
8. **Research Exhibition Committee** (Since 2006-now). Ministry of Science, Technology and Innovation (**MOSTI**)
9. **Member Technical Committee [TC]** for ScienceFund Application Under Industrial Cluster (Since 2006).
10. **Penilaian Tahap Kecekapan (TK3) Lecture** to Universiti Malaysia Perlis (UniMAP) Lecturers under Topics Scientific Writing and Publication at UniMAP on 27 June 2007.
11. **National Industrial Standard Committee (JSP N)** for Rubber and Rubber Products (Since 2007).
12. Panel of Jury at **Malaysian Technology Expo 2007 (MTE2007)**, 30 September – 2 October 2007, Putra World Centre, (PWTC), Kuala Lumpur.
13. Organizing Committee for **12ACC Asian Chemical Congress (12ACC) 2007: International Symposium on Advances in Polymer and Material Chemistry (PMC2007)**, Organised by Institut Kimia Malaysia, August 23-25, 2007, Putra World Trade Centre, Kuala Lumpur.
14. **Penilaian Tahap Kecekapan (TK3) Lecture** to Universiti Malaysia Perlis (UniMAP) Lecturers under Topics Scientific Writing and Publication at UniMAP on 14 May 2008.
15. Organizing Committee for **3rd International Conference of Biotechnology Engineering 2013**, 2-4 July 2013, Kuala Lumpur, Malaysia.
16. Organizing Committee for **The 1<sup>st</sup> Asia Pacific Rubber Conference (APRC) 2013**, 5-6 September 2013, Surat Thani, Thailand.
17. Organizing Committee for **22<sup>nd</sup> Scientific Conference of Microscopy Society Malaysia 2013**, 26-28 November 2013, Kuala Terengganu, Terengganu.

#### **Editing, Refereeing /Reviewer and External Examiner Activities**

1. Reviewer for manuscript “ Study on Physical and Mechanical Properties of BioPol-Jute

Composite” which has been sent to Journal of Polymer-Plastics Technology and Engineering, Published by Marcel Dekker, Inc., New York, U.S.A.

2. **Editorial Review Board** for Journal of Polymer-Plastics Technology and Engineering, Pub By Marcel Dekker, Inc. U.S.A. (Since 1998)
3. Reviewer for manuscript “ Compatibilization of Polymer Blends” Chapter of the “Polymer, Alloy and Blend” Ed. By Simon and Shonaike, Marcel Dekker, Inc. U.S.A.
4. Reviewer for manuscript “The Effect of the Adhesion System on the Physico Mechanic Electrical Properties of SBR/Polyester Short Fiber Composites” which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.). (1998)**
5. Reviewer for manuscript “Abrasion Property of Epoxidised Natural Rubber” which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.). (1998)**
6. Reviewer for manuscript “Rheological Studies of Dynamic Vulcanization of Butyl Rubbe and Polypropylene Blends” which has been sent to **Journal of Polymer-Plastic Technology and Engineering (U.S.A.). (1998)**
7. Reviewer for manuscript “Preparation of Jute Plastic Composite by Pre-Irradiation Method” which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.). (1998)**
8. Reviewer for manuscript “Polymer Blends of Nylon-12 and ABS: Synthesis and Characterization” by which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.). (1998)**
9. Reviewer for manuscript “Jute Reinforced Urethane Polymer Composite Under Gamma Radiation” which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.) (1998)**
10. Reviewer for manuscript ‘Poly (Amido-Imide)s Based on Amino terminated Oligoimides’ which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.). (1998)**
11. Reviewer for manuscript ‘Studies on Sand-Unsaturated Polyester Composites Materials’ which has been sent to **Journal of Polymer-Plastics Technology and Engineering**

**(U.S.A.). (1998)**

12. **External examiner** for a M.Sc candidate at Engineering Faculty, **Universiti Kebangsaan Malaysia (UKM)**, Bangi, Selangor (1998).
13. **External examiner** for a MSc candidate at Engineering Faculty, **Universiti Kebangsaan Malaysia (UKM)**, Bangi, Selangor (1998).
14. Reviewer for manuscript ‘Mode II Interlaminar Failure Mechanisms in Carbon Fibre/PEEK and Carbon Fibre/Epoxy composites’ by which has been sent to **The Journal of the Faculty of Engineering, UKM. (1998)**
15. Reviewer for manuscript ‘Effect of Stearic Acid Concentration on the Reversion Behavior of Epoxidized Natural Rubber’ which has been sent to **Journal of Applied Polymer Science (U.S.A.) (1998)**
16. Reviewer for manuscript ‘Acid Resistance of Polyester-Sand/Clay Composite Materials’ which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.)(1998)**
17. Reviewer for manuscript ‘A Study on Mechanical Performance of Jute-Epoxy Composites’ which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.)(1998)**
18. Reviewer for manuscript ‘Electromechanical Behaviour of Natural Rubber/Lignocellulosic Material Composites’ which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.). (1998)**
19. Reviewer for manuscript ‘A Study on Reactive Enhancement of Filler Filled HDPE’ which has been sent to **Journal of Polymer-Plastics Technology and Engineering (U.S.A.). (1998)**
20. Reviewer for manuscript ‘Melt-rheology of Natural Rubber Modified with Phosphorylated Cashew Shell Liquid Prepolymer’ which has been sent to **Iranian Polymer Journal, Iran. (1999)**
21. Reviewer for manuscript ‘Structural Characterization of Wild Rubbers. Microstructure of the rubber extracted from Ficus Elastica by <sup>13</sup>C-NMR’ which has been sent to **Polymer**

**Testing. (1999)**

22. Reviewer for manuscript “ Effect of rice husk ash as a filler in natural rubber compounds” which has been sent to **European Polymer Journal (U.K) (1999)**
23. Reviewer for manuscript “Studies of styrene butadiene rubber gum blends” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (1999)**
24. Reviewer for manuscript “Cure characteristics and mechanical properties of natural rubber-reclaimed rubber blends” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (1999)**
25. Reviewer for manuscript “Instrumented impact behavior of particulate filled composites” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (1999)**
26. Reviewer for manuscript “ Effect of fibre reinforcement on thermal stability and swelling behavior of CR/NBR blends” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (1999)**
27. Reviewer for manuscript “ Sorption, diffusion and permeation of chlorinated hydrocarbon vapors through natural rubber, epoxidized natural rubber and their blends” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (1999)**
28. Reviewer for manuscript “ Tensile properties of jute yarns improved with organo-metallic complexes” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (1999)**
29. Reviewer for manuscript “ Rheological study of some melts of high density polyethylene intensively charged with surface-treated CaCo<sub>3</sub>. 1. The viscous component” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (1999)**
30. Reviewer for manuscript “ Influences of Polymer Concentration on Lithium Ion Conductive Electrolyte Gelled with Poly(Methyl Methacrylate” which has been sent to **Journal of Materials Processing Technology-Special Volume AMPT’98 (U.K) (1999).**
31. Reviewer for manuscript “Effect of Natural Rubber on the Interlaminar Fracture Properties of Fibre Reinforced Thermoplastic Composites” which has been sent to **Journal of Materials Processing Technology-Special Volume AMPT’98 (U.K) (1999).**

32. Reviewer for manuscript “Thermal Performance of Thermoplastic Natural Rubber Solar Collector” which has been sent to **Journal of Materials Processing Technology-Special Volume AMPT’98 (U.K)** (1999).
33. Reviewer for manuscript “ Fracture of Irradiated Polymers” which has been sent to **Journal of Materials Processing Technology-Special Volume AMPT’98 (U.K)** (1999).  
**Editorial Board** for MicroSom (Bulletin of the Electron Microscopy Society of Malaysia, EMSM) (**Since Mac 2000**)
34. Reviewer for manuscript “Improving Performance of Polypropylene Through Combined Use of Calcium Carbonate and Metallocene Produced Impact Modifier” which has been sent to **Polymer-Plastics Technology and Engineering (USA)** (**2000**)
35. Reviewer for manuscript “Study of Nitrile-Butadiene Rubber and PP Grafting Crosslinked System” which has been sent to **Polymer-Plastics Technology and Engineering (USA)** (**2000**)
36. Reviewer for manuscript “The Influence of Compatibilizers on Nitrile-Butadiene Rubber and PP Blends” which has been sent to **Polymer-Plastics Technology and Engineering (USA)** (**2000**)
37. Reviewer for manuscript “Binary Blends of Acrylonitrile-Butadiene-Styrene Grafted Copolymers with C5- modified Petroleum Resins” which has been sent to **Polymer-Plastics Technology and Engineering (USA)** (**2000**)
38. Reviewer for manuscript “Effect of Fillers and Vulcanizing Systems on the Physico-Mechanical and Electrical Properties of EPDM Vulcanizates” which has been sent to **Polymer-Plastics Technology and Engineering (USA)** (**2000**)
39. Reviewer for manuscript “Properties of Rubber Compounds Containing Powdered Vulcanized Waste” which has been sent to **Iranian Polymer Journal, Iran.** (**2000**)
40. Reviewer for manuscript ‘Structure and Properties of Cellular Polypropylene/Natural Rubber Blends Compatibilised with Bismaleimide” which has been sent to **The Journal of Industrial Technology, SIRIM, Malaysia.** (**2000**)
41. **Book Reviewer** entitled “Manufacturing Process-Volume 1” for **Citra Pendeta Award**

- (Profilic book writer award-Science & Technology Category) □ehavior□ by **Dewan Bahasa dan Pustaka**, Malaysia for year 2000.
42. **Book Reviewer** entitled “Transducer and Measurement” for **Citra Pendeta Award** (Profilic book writer award-Science & Technology Category) □ehavior□ by **Dewan Bahasa dan Pustaka**, Malaysia for year 2000.
  43. **Book Reviewer** entitled “Manufacturing Process-Volume 11” for **Citra Pendeta Award** (Profilic book writer award-Science & Technology Category) organised by **Dewan Bahasa dan Pustaka**, Malaysia for year 2000.
  44. Reviewer for manuscript “Ultrasonic Measurements of Photocrosslinking Unsaturated Polyether Urethane Copolymers” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
  45. Reviewer for manuscript “Preparation and Characteristics of Natural Rubber/Ethylene Propylene Diene Monomer Blends” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
  46. Reviewer for manuscript “Accuracy Measurement of Grafting Degree of Radiation-Induced Surface Graft Polymerization by Weighing” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
  47. Reviewer for manuscript “Phenol Formaldehyde Resin Modification with Lignin” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
  48. Reviewer for manuscript “Characterisation of Biodegradable Aliphatic Copolyesters and Their Starch Blends” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
  49. Reviewer for manuscript “Effect of Urethane Based Bonding Agent on the Cure Characteristics and Mechanical Properties of NR/NTR/SNF Composite” which has been sent to **Polymer-Plastics Technology and Engineering USA) (2001)**
  50. **External examiner** for Engineering Master candidate “Mechanical and Morphological Properties of Polypropylene Linear Low Density Polyethylene and Natural Rubber Blends” at Chemical and Natural Resources Engineering Faculty, **Universiti Teknologi**

**Malaysia (UTM), Johor (2001)**

51. Reviewer for manuscript “Surface Modification of Carbon Black by Vegetable Oil-Its Effect on the Rheometric, Hardness, Abrasion, Rebound Resilience, Tensile, Tear and Adhesion Properties” which has been sent to **J. of Applied Polymer Science (USA) (2001)**
52. **External examiner** for Engineering Master candidate “The Effects of Multilayer Flexible-Packaging Material Properties to the Parameters of Bar Sealing Process” at **Kolej Universiti Teknologi Tun Hussein Onn (KUITTHO), Johor (2001)**
53. **External examiner** for Engineering Master candidate “Relationship Between Mechanical Properties and Morphology of Recycle Thermoplastic Composites Reinforced With Particle and Fibre E-Glass” at Mechanical and Material Department, Engineering Faculty, **Universiti Kebangsaan Malaysia (UKM), Selangor (2001)**
54. **External examiner** for Engineering Master candidate “Properties of Polystyrene-Benzoylated EFB Composites” at Science and Technology Faculty, **Universiti Kebangsaan Malaysia (UKM), Selangor (2001)**
55. Reviewer for manuscript “LDPE-g-MAH prepared through solid-phase mechanochemical grafting and its compatibilizing effects on HDPE CaCO<sub>3</sub>” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
56. Reviewer for manuscript “Morphology and properties of star-SIBR and NR/SBR blends” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
57. Reviewer for manuscript “The effect of surface treatment of Bentonite on the mechanical properties of polypropylene-Bentonite Composites” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
58. Reviewer for manuscript “Filler effect of starch and urea on linear low density polyethylene as biodegradable polymer composites” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
59. Reviewer for manuscript “Behaviour of the thermoplastic elastomeric polyurethane with the precipitation temperature” which has been sent to **Polymer-Plastics Technology and**



**Engineering (USA) (2001)**

60. Reviewer for manuscript “Preparation and characterization of sawdust/N-Methylacrylamide/Methacrylic acid cation exchange composites” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
61. Reviewer for manuscript “Evaluation of Amino-Phosphine compound as antioxidants and antifatigue agents in NR and SBR vulcanizates” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
62. Reviewer for manuscript “Modification of surface properties of PP and PE” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
63. Reviewer for manuscript “Preparation and Utilization of carboxy containing cation exchange cellulose” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
64. Reviewer for manuscript “Synthesis and rheological behaviour of graft-type ACS resin” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
65. Reviewer for manuscript “Compatibility of block copolymers on blend of polysulfone and semi-aromatic polyester crystalline polymer” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
66. Reviewer for manuscript “Graft copolymerization of polypropylene copolymer with maleic anhydride: Effect of grafting on thermal, mechanical properties and paintability” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
67. Reviewer for manuscript “Properties of HDPE/EPDM blends vulcanized by ionizing radiations and loaded with different fillers” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
68. Reviewer for manuscript “Polystyrene-Benzoylated EFB reinforced composites” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
69. Reviewer for manuscript “Irradiation modification of PVC/ENR blend” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
70. Reviewer for manuscript “Grafting of maleic anhydride to polyethylene in a single screw

- extruder” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2001)**
71. Reviewer for manuscript “The effect of mixing temperature on the mechanical properties of rubberwood saw dust filled high density polyethylene (HDPE)” which has been sent to **Journal Institute of Materials Malaysia (Malaysia) (2001)**
  72. **External examiner** for Master candidate “ Fabrication and Characterization of Polystyrene-Barium Ferrite Composites Reinforced Benzoylated Oil Palm Empty Fruit Bunch Fibres ” at Science and Technology Faculty, **Universiti Kebangsaan Malaysia (UKM)**, Selangor (2001)
  73. Reviewer for manuscript “Processability Parameters and Mechanical Properties of Sisal/Oil Palm Hybrid Fibre Reinforced Natural Rubber Composites” which has been sent to **Fibres and Composites: Science and Technology (Malaysia E-Journal) (2002)**
  74. Reviewer for manuscript “ Cure Characteristics and Mechanical Properties of Butadiene Rubber/Whole tyre Reclaimed Rubber Blends” which has been sent to **Progress in Rubber, Plastics and Recycling Technology” (UK) (2002)**
  75. **External examiner** for Master candidate “Thermoplastic Natural Rubber Magnetic Composites Based on Natural Rubber/Poly Methyl Methacrylate” at Science and Technology Faculty, **Universiti Kebangsaan Malaysia (UKM)**, Selangor (2002)
  76. Reviewer for manuscript “Mechanical and Fractographic Behavior of Natural Rubber-Cellulose II Composites” which has been sent to **Journal of Materials Science” (UK) (2002)**
  77. Reviewer for manuscript “Rheological Study of Some Melts of High Density Polyethylene Intensively Charged with Surface Treated CaCo<sub>3</sub>. III. Study of the Melt Fracture” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2002)**
  78. Reviewer for manuscript “Degradation Measurements of Linen Fabrics” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2002)**
  79. Reviewer for manuscript “Dynamic Crack Propagation for PMMA under Different Annealing Temperatures” which has been sent to **Polymer-Plastics Technology**

**and Engineering (USA) (2002)**

80. Reviewer for manuscript “Chemical Recycling, Kinetics and Thermodynamics of Hydrolysis of Poly (Ethylene Terephthalate) (PET) Waste in Sulfuric Acid in Presence of Phosphoric Acid” which has been sent to **Polymer-Plastics**

**Technology and Engineering (USA) (2002)**

81. Reviewer for manuscript “Phenolic and Lignophenolic Closed Cells Foams: Thermal Conductivity and Other Properties” which has been sent to **Polymer-Plastics**

**Technology and Engineering (USA) (2002)**

82. Reviewer for manuscript “Modification of Ethylene Propylene Diene Terpolymer Rubber by Some Thermoplastic Polymers” which has been sent to

**Polymer-Plastics Technology and Engineering (USA) (2002)**

83. Reviewer for manuscript “Morphology and Tensile Properties of Polycarbonate/Polyethylene Alloy in Phase Inversion Region” which has been sent to **Polymer-Plastics Technology and Engineering (USA) (2002)**

84. Reviewer for manuscript “Improving Some Cotton Fabrics Properties Using A Recent Physical Pretreatment” which has been sent to **Polymer-Plastics**

**Technology and Engineering (USA) (2002)**

85. **External examiner** for Engineering Master candidate “Development of Polysulfone Asymmetric Membrane Using Pneumatically-Controlled Membrane Casting System and the Study of the Effects of Shear Rate and Forced Convection Residence Time on the Gas Separation Membrane Performance” at Chemical and Natural Resources Engineering Faculty, **Universiti Teknologi Malaysia (UTM)**, Johor (2002)

86. **External examiner** for PhD candidate “Rheological Studies of Feeding Material which contain Oil Palm Stearin for Metal Injection Moulding Process” at Engineering Faculty, **Universiti Kebangsaan Malaysia (UKM)**, Selangor (2002)

87. **External examiner** for MSc candidate “ Sintesis Polimer Berkonjugat dan Potensi Penggunaannya Sebagai Bahan Penderia” at Faculty Science and Technology, **Universiti Kebangsaan Malaysia (UKM)**, Selangor (2003).

88. Reviewer for manuscript “Effects of EB-irradiation on 60/40 atural rubber/polystyrene blends in the presence of m-phenylenebismaleimide” which has been sent to Jurnal Sains Nuklear Malaysia (**Malaysia**) (**2003**)
89. Reviewer for manuscript “Ground Rice Husk as Filler in Rubber Compounding” which has been sent to Jurnal Teknologi (Siri A)(**Malaysia**) (**2003**)
90. Reviewer for manuscript “Curing Characteristics of Unsaturated Polyester/ Aramid Reinforced Composite: Microwave vs Thermal Energy” which has been sent to Jurnal Teknologi (Siri A)(**Malaysia**) (**2003**)
91. Reviewer for manuscript “Visualisation of the Network Structure in Some Biograded NR Latex Gloves” which has been sent to Journal of Rubber Research (**Malaysia**) (**2003**)
92. Reviewer for manuscript “Amidino Thiourea as a secondary accelerator in the sulphur vulcanization of natural rubber containing fillers” which has been sent to **Progress in Rubber, Plastics & Recycling Technology (UK)** (**2003**)
93. Reviewer for manuscript “Effect of Talc Filling on the Mechanical Properties of EPDM Rubber Toughened PS” which has been sent to J. Appl. Polym. Scien. (**USA**) (**2003**)
94. Reviewer for manuscript “Influence of Thickness and Modulus on the Environment Degradation of Vulcanised NR Latex Films” which has been sent to Journal of Rubber Research (**Malaysia**) (**2003**)
95. Reviewer for manuscript “Kajian Kesan Penambahan Gentian Twaron Dalam Adunan NR/LLDPE dan ENR/LLDPE Terhadap Sifat Mekanik Komposit” which has been sent to Jurnal Sains Malaysiana (**Malaysia**) (**2004**)
96. Reviewer for manuscript “The Effect of Pressure and Fiber Size in the Preparation of Medium-Density Fiberboard” which has been sent to Malaysian Journal of Chemistry (**Malaysia**) (**2004**)
97. Reviewer for manuscript “Mechanical Properties of Polyurethane Composites From Oil Palm Resources” which has been sent to Iranian Polymer Journal

(Iran) (2004)

98. Reviewer for manuscript “Effect of Carbon Black on Rate Constant and Activation Energy of Vulcanization in EPDM/BR and EPDM/NR Blends” which has been sent to Iranian Polymer Journal

(Iran) (2004)

99. Reviewer for manuscript “Physico-Mechanical Properties of Cellulose Filled Styrene Butadiene Rubber Composites” which has been sent to J. Appl. Polym. Scien. (USA) (2004)

(Iran) (2004)

100. **External examiner** for Engineering Master candidate “Synthesis, Characterization and Microwave Adsorption of Polyarylene” at Chemical Science and Food Technology Department, **Universiti Kebangsaan Malaysia (UKM)**, Selangor (2004)

101. Reviewer for manuscript “Sonication Effect on the Mechanical Properties of MWNT Reinforced Natural Rubber”, which has been sent to Journal of Composite Materials (2011)

102. Reviewer for manuscript “Effects of mineral and Natural fillers on Mechanical properties of Poly-Vinyl Chloride (PVC): A review”, which has been sent to Polymer Composites (2011)

103. Reviewer for manuscript “Thermoplastic Natural Rubber (TPNR) Composite Reinforced with Nanoclay, MWNTs and Hybrid Nanoclay-MWNTs. ”, which has been sent to Journal of Reinforced Plastics and Composites (2011)

104. Reviewer for manuscript “Influence of Carbon Blacks Structure and Specific Surface Area on the Dynamic and Dielectric Properties of Filled Rubber Composites. ”, which has been sent to International Journal of Polymer Science (2011)

105. Reviewer for manuscript “Curing Characteristics and Mechanical Properties of Scrap Polyethylene terephthalate (PET) Fiber Reinforced Waste Styrene-butadiene Rubber Latex Composites. ”, which has been sent to Journal of Applied Polymer Science (2011)

106. Reviewer for manuscript “A Short Review on New Prospective of Natural Gum as a Natural Polymer in Oral Films. ”, which has been sent to Advances In Polymer

Technology (2011)

107. Reviewer for manuscript “Effect of gamma radiation dose and sensitizer on the physical properties of irradiated natural rubber latex. ”, which has been sent to Songklanakarin Journal of Science and Technology (2011)
108. Reviewer for manuscript “Cooperative effects of carbon nanotubes and carbon black in improving the properties of composites with a poly(1,4-cis-isoprene) matrix. ”, which has been sent to Carbon (2011)
109. Reviewer for manuscript “Emulsion grafting vinyl monomers onto starch for reinforcement of styrene-butadiene rubber ”, which has been sent to Carbohydrate Polymers (2011)
110. Reviewer for manuscript “Effects of irradiation on the mechanical and electrical properties of alumina trihydrate added low density polyethylene-ethylene vinyl acetate copolymer blends”, which has been sent to Journal of Vinyl and Additive Technology (2011)
111. Reviewer for manuscript “Polypropylene nanocomposites obtained by in situ polymerization using metallocene catalyst. Influence of the nanoparticles on the final polymer morphology”, which has been sent to Journal of nanomaterials (2012)
112. Reviewer for manuscript “Liquefied tropical wood/polypropylene composites: Preparation and physico-mechanical properties”, which has been sent to Journal of Polymers and the Environment (2012)
113. Reviewer for manuscript “Characterization of various organic waste nanofillers obtained from oil palm ash”, which has been sent to BioResources (2012)
114. Reviewer for manuscript “Novel polylactic acid/corn stalk eco-composites: Effect of new coconut oil coupling agent (COCA) ”, which has been sent to Polymer Bulletin (2012)
115. Reviewer for manuscript “Effect of maleated compatibiliser (PBSGMA) addition on the flexural properties and water absorption of poly(butylene succinate)/kenaf bast fibre composites”, which has been sent to Sains Malaysiana (2012)
116. Reviewer for manuscript “Electrically conductive composites of silicone rubber using organic polymer”, which has been sent to SILICON (2012)

117. **External examiner** for thesis entitled: “Pencirian perekat berasas tanin dari kulit pokok acacia mangium” at Universiti Kebangsaan Malaysia. (2012)
118. **External examiner** for thesis entitled: “EFB-Glass fibre recycled polypropylene hybrid composite" at Universiti Malaysia Pahang. (2012)
119. **External examiner** for thesis entitled: “Intercalation of urea into kaolinite nanoclays for controlled release fertilizer application” at Universiti Putra Malaysia. (2012)
120. **External examiner** for thesis entitled: “Optimization and characterization of melamine urea formaldehyde (MUF) based adhesive using natural fillers for plywood" at Universiti Malaysia Pahang. (2012)
121. **External examiner** for thesis entitled: “Characterization and properties of aluminium oxide composites as catalyst for depolymerization of low density polyethylene to liquid oil” at Universiti Malaysia Perlis. (2012)
122. Reviewer for manuscript “Recycling of bioplastics, their blends and biocomposites: A review”, which has been sent to European Polymer Journal (2013)
123. Reviewer for manuscript “Bamboo fiber polypropylene composites: Effect of fiber treatment and nano clay on mechanical and thermal properties”, which has been sent to Journal of Vinyl and Additive Technology (2013)
124. Reviewer for manuscript “Production of alpha-alumina nanoparticles using aquatic humic substances”, which has been sent to Powder Technology (2013)
125. Reviewer for manuscript “Enhanced mechanical properties of polypropylene reinforced with chemical treated asbetos tailings”, which has been sent to Journal of Hazardous Materials (2013)
126. Reviewer for manuscript “Water absorption, retention and the swelling characteristics of cassava starch grafted with polyacrylic acid”, which has been sent to Carbohydrate Polymers (2013)
127. Reviewer for manuscript “Synergistic effect of carbon black and carbon-silica dual phase filler in natural rubber matrix”, which has been sent to Polymer Composites (2013)
128. Reviewer for manuscript “Properties enhancement of natural rubber hybrid composites

incorporated industrial and agro waste derived silica with and without silane”, which has been sent to Journal of King Saud University (2013)

129. **External examiner** for thesis entitled: “Properties of chemical modified water hyacinth fibers (Eichhornia Crassipes) filled low density polyethylene/natural rubber (LDPE/NR) blends” at Universiti Malaysia Perlis. (2013)
130. **External examiner** for thesis entitled: “Kenaf and rice husk fibers filled polypropylene composites containing ammonium polyphosphate” at Universiti Teknologi Malaysia. (2013)
131. **External examiner** for thesis entitled: “Development of nanocomposite polyester/liquid natural rubber reinforced with cellulose nanocrystals from kenaf bast fiber” at Universiti Kebangsaan Malaysia. (2013)
132. **External examiner** for thesis entitled: “Kajian kesan penyinaran alur elektron dan penambahan PEGMAH ke atas sifat mekanik dan terma adunan etilena vinil asetat (EVA) - serbuk tayar terbang (WTD)” at Universiti Kebangsaan Malaysia. (2013)

#### **Internationalization and oversea connection:**

1. Host Scientist for Associate Prof. Dr Yasuhisa Tsukahara from Kyoto Institute of Technology, Japan under JSPS/VCC Program from 20 – 27 Mac 1997.
2. Editorial Board for International Journal “**Polymer-Plastics Technology and Engineering**” Marcel Dekker, U.S.A. (Since 1998)
3. Editorial Board for International Journal “**Iranian Polymer Journal**” Iran Polymer Institute (Since 2002)
4. Reviewer for **Journal of Applied Polymer Science**, John Wiley and Sons, U.S.A.
5. Reviewer for **Iranian Polymer Journal**, Iran.
6. Reviewer for **Polymer Testing**, United Kingdom.
7. Reviewer for **European Polymer Journal**, United Kingdom.
8. Reviewer for **Polymer-Plastics Technology and Engineering**, United Kingdom.
9. Reviewer for **Journal of Materials Processing Technology**, United Kingdom



10. Reviewer for **Journal Institute of Materials Malaysia**, Malaysia.
11. Reviewer for **Progress in Rubber, Plastics and Recycling Technology**, United Kingdom.
12. Reviewer for **Fibres and Composites: Science and Technology (Malaysia E-Journal)**
13. Reviewer for **Journal of Materials Science**, United Kingdom.
14. Reviewer for **Journal of Rubber Research**, Malaysia (RRIM).
15. Reviewer for **Jurnal Teknologi (Siri A)**, Malaysia (UTM).
16. Reviewer for **Jurnal Sains Nuklear Malaysia**, Malaysia (MINT).
17. Editorial Board for **Journal of Physical Science**, Malaysia (USM)
18. Reviewer for **Jurnal Sains Malaysiana**, Malaysia (UKM).
19. Reviewer for **Malaysian Journal of Chemistry**, (Malaysia) (Malaysian Chemical Institute).
20. Chief Editor for **Journal of Engineering Science**, Malaysia (USM)
21. Chief Editor for **MicroSOM (Bulletin of the Microscopy Society Malaysia, MSM)**

### **Short Course/Workshop**

1. ‘ **Effective Study Learning** ’ and ‘ **Time Management** ’ Talk given in the
2. ‘ **Self Development and Student Success Camp** ’. Organised by Universiti Sains Malaysia/BTN/ Pergerakan Wanita Bhg Tasek Gelugor, on 28-30 Jun. 1996, Gurun, Kedah.
3. ‘ **Tips to become a success student** ’. Motivation talk to Sungai Bayor Secondary School Students, Selama, Perak Darul Ridzuan at Conference Room School of Industrial Technology, USM on 22 May 1997.
4. ‘ **Self Motivation** ’ Motivation talk to Matriculation student from Kulim Mara College organised by Kelantanese Student Association (HAAK) and Persatuan Ilmu Pendidikan (PIP) USM at Lobi Gemilang, USM on 15 August 1997. ‘ **Job Prospect for Engineering and Technology Students** ’ Talk given in the **Program Seminar Sains dan Islam 1997**

- organised by Daerah Kulim-Bandar Baharu Education Office and Parent and Teacher Association, 13 Nov. 1997, BTN, Kulim, Kedah.
5. Panel member in the **Forum “ Job Prospect for the Science and Technology Students” in the Seminar Kesedaran Sains dan Teknologi 1997 for Penang State level** on 14 Nov. 1997 at Tuanku Syed Putra Hall, USM.
  6. **‘You also will become an excellent student’**. Motivation talk to Yayasan Restu Students, Butterworth on 10 Nov. 1997.
  7. **‘Every Student has an excellent characteristics’**. Motivation talk to Sultan Yahya Petra Secondary School at USM during their study visit in the STPM Motivation and Sport Management Course on 30 Nov – 4 December 1997.
  8. **One of the Panel in Education Forum “Parents generate an excellent students”**. Organised by Teacher and Parent Association of the Dato’ Onn Secondary School, Butterworth on 2 May 1998.
  9. One of the **speaker** in the **“Smart Student Workshop”** on 12 June 1998 at Kota Bharu, Kelantan organised by Pusat Bina Ilmu Barat Daya, Pulau Pinang.
  10. **Talk given in the “ Program Mesra Bersama Anak-anak Yatim Peringkat Zon Utara Sempena Ekspo Konvo ’98 entitled “Every body has an excellent characteristics”** on 4 July 1998, Dewan Kembara, USM.
  11. **“Strategies to face PMR dan SPM examinations”** Motivation talk to Taman Orkid Parent Association students, Seberang Perai Utara, Pulau Pinang on 2 August 1998.
  12. One of the **speaker** in “SMART Student Camp1” organised by Bina Ilmu Barat Daya Centre on 29/5 – 31/5/ 1999 at Universiti Sains Malaysia.
  13. One of the **speaker** in “SMART Student Camp 2” organised by Penang Port Club On 16-18/7/99 at Seberang Perai Polytechnic, Penang.
  14. One of the **speaker** in “Excellent student-Excited parent Course” organised by Sport and Welfare Club (KESAKTI), School of Industrial Technology, USM on 24/7/99 at Conference Room, PPTI, USM.

15. One of the **speaker** in “ How to prepare the coming examination?” Workshop organised by USM Islamic Staff Association at Lecture Theatre S, USM on 1/8/1999.
16. **Invited speaker** in “Study Skill Workshop” organised by Parent and Teacher Association of Sultan Badlishah Secondary School, Kulim, Kedah on 15/8/199.
17. **Invited speaker** in Motivation Talk “How to Become An Excellent Parents” Organised by Parent and Teacher Association of Tasek Gelugor Primary School, Tasek Gelugor, Pulau Pinang on 29<sup>th</sup> January, 2000.
18. **Invited speaker** in Motivation Course “JadiBes System” Organised by Bina Ilmu Centre on 30<sup>th</sup> January, 2000 at RECSAM, P. Pinang for PMR and SPM students.
19. “How to Generate Self Motivation”-**Motivation talk** to TESDEC students at PPTI Conference Room, 28 April 2000, USM.
20. “Motivation and Self Development” **Motivation talk** to Permatang Tok Jaya Secondary School Students, Seberang Perai Utara, P. Pinang – organised by PERDA and USM on 4 Nov. 2000
21. “To be the best” – **Motivation talk** to Dato Onn Secondary School Students, Seberang Perai, Penang on Mac 16, 2001.
22. “7 Challenges to become best student” – **Motivation talk** to Kulim Secondary School Students, Kulim, Kedah on May 4, 2001.
23. “Tips to become best student”- **Motivation talk** to Bukit Gambir Secondary School Students, Penang, on Oct. 22, 2001.

## **Teaching Experience**

### **Courses Taught**

IPK 100/3	Introduction to Polymer
IPK 102/3	Polymer Structure
IPK 202/3	Polymer Physics 1
IPK 207/3	Properties and Testing of Polymers

IPK 302/3	Polymer Physics 11
IPK 306/3	Rubber: Processing and Product
IPK 404/3	Polymer Technology 11
EBB 524/3	Composite Materials
EBB 220/3	Engineering Materials

### Final Year Project Supervision

No.	Student Name	Title	Year
1.	Norliza Abu Noh	The Effect of Cationic Surfactant on Curing Characteristics and Mechanical Properties Of SMR L and ENR 50	95/96
2.	Rosnah Nawang	Natural Rubber Composites Reinforced with Short Oil Palm Fibre	95/96
3.	Salmiah Ismail	Palm Oil Fatty Acid as an Activator in Various Vulcanization Systems of Rubber	95/96
4.	Chia Hoon Hiung	The Effect of Multifunctional Additive (MFA) in Silica Reinforced ENR Compounds	96/97
5.	Ng Chai Teik	Synthesis and Application of New Rubber Additive Based on Palm Oil Fatty Acid in Rubber Compounding	96/97
6.	Hasliza Isa Nurdin	Potential of Using Oil Palm Wood Flour as a Filler in Natural Rubber Composites	96/97
7.	Nasaruddin Mohd Nor	The Effect of MFA and Combination of Silane Coupling Agent and MFA on Properties of Rice Husk Ash Filled Natural Rubber	97/98
8.	Ragvinder Singh Jessy	The Effect of Using Various Combination of Accelerator and High Styrene Resin on Processing and Vulcanizate Properties of Rubber	97/98
9.	Anuar Harun	The Effect of PALM Oil Fatty Acid on Reversion and Fatigue Behaviour of Carbon Black Filled NR	97/98
10.	Few Ling Chung	Potential of Using WRHA as a Filler in SMR L	97/98
11.	Faizal Jalil	The Effect of Ethyl Diamine Dilaurate Concentration on Curing Characteristics and Mechanical Properties of Silica and Carbon Black Filled SMR L, SBR, CR & EPDM.	98/99
12.	Kamal Sabri Kamaruddin	The Comparison Application of Stearic Acid and Palm Oil Fatty Acid on Mechanical Properties And Swelling Behaviour of SMR L	98/99
13.	Muhammad Nizam Jamaludin	Polyethylene/Natural Rubber Filled White Rice Husk Ash	98/99
13.	Hairunezam Hj Mohammad	Mechanical Properties and Oil Resistance of SBR/ENR-50 Blend	98/99

15.	Suzaimah Shafie	Curing Characteristics and Mechanical Properties of SBR/ENR-50 Blend	98/99
17.	Shuhelmy Shuib	Curing Characteristics Studies of Bamboo Powder-Natural Rubber Composites	99/2000
18.	Edyham Mohd Rabu	Potential Application of Bamboo Fibre as A Filler in SMR L	99/2000
19.	Quah Ewe Hock	Fatigue Behaviour and Curing Characteristics of SMR L/ENR 25 and SMR L/SBR Blend	99/2000
20.	Lawrence Chin	Fatigue Behaviour of SMR L/ENR 25 and SMR L/SBR Blend with and without Silica	99/2000
21.	Pao Liang Lim Chek Chong	Curing characteristics, Dynamic Properties and Swelling Behaviour of NR/CR and ENR/CR Blend with MFA	99/2000
22.	Ng Kooi Sim	Potential Application of WRHA as a Filler in NR/PP Blend	99/2000
23.	Lam Mega	PP/NR Blend Reinforced with WRHA	99/2000
24.	Ho Bee Hong	Polypropylene Composite Reinforced Silica and WRHA as Hybrid Fillers	2000/2001
25.	Chia Yean Ping	Potential Application of Hybrid Silica and WRHA as A Filler in PP Composites	2000/2001
26.	Woon Hon Wei	Curing Characteristics and Swelling Behaviour of SMR L, ENR 25 and SBR Cured with Different types of Vulcanization Systems	2000/2001
27.	Tham Chee Keong	Curing Characteristics and Mechanical Properties of SMR L, ENR 25 and SBR Cured with Different types of Vulcanization Systems	2000/2001
28.	Tan Kean Sing	Mechanical Properties and Swelling Behaviour of SMR L/ENR 25 and SMR L/SBR Blend with Various Fillers	2000/2001
29.	Maruthasalam Moorthy	Curing Characteristics of SMR L/ENR 25 and SMR L/SBR Blend with Various Fillers	2000/2001
30.	Lee Jit Lock	Mechanical Properties of Bamboo Filled PP/ENR Composites	2000/2001
31.	Tan Chong Keong	Degradation Studies of Bamboo Filled PP/ENR Composites	2000/2001
32.	Lee Yen Sie	Mechanical and Thermo-oxidative Ageing Properties of PVC/ENR 50 and PVC/SMR L Blends	2001/2002
33.	Wong Siew Lee	Curing Characteristics and Swelling Behaviour of PVC/ENR 50 and PVC/SMR L Blends	2001/2002
34.	Kwan Phiew Kuen	The Effect of Sulfur Loading on Mechanical Properties of NBR/PVC, NBR/SMR L/PVC And NBR/ENR 50/PVC Blends	2001/2002
35.	Chey Wai Ling	The Effect of Sulfur Loading on Viscoelastic and Swelling Properties of NBR/PVC, NBR/SMR L/PVC and NBR/ENR 50/PVC Blends.	2001/2002
36.	Grace Lim Pei Ling	Curing Characteristics and Mechanical Properties	2001/2002

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|     |                         | of Carbon black and Silica Filled ENR 25 and SBR Compounds   |           |
| 37. | Tan Pei Sun             | Curing Characteristics and Swelling Behaviour of Carbon black and Silica Filled ENR 25 and SBR Compounds             | 2001/2002 |
| 38. | Norhayati Abdullah      | The Effect of Pofa and Silane Coupling Agent on Curing Characteristics and Swelling Behaviour of Filled NR Compounds | 2001/2002 |
| 39. | Siti Maznah Kabeb       | Curing Characteristics and Swelling Behaviour of Kaolin Filled NR Compounds  | 2001/2002 |
| 40. | Siti Atikah Ashar       | The Effect of Pofa and Silane Coupling Agent on Mechanical Properties of Kaolin Filled NR Compounds                  | 2001/2002 |
| 41. | Mohd Fakharudin Mahmood | Curing Characteristics and Mechanical Properties of Hybrid Silica/Carbon Black Filled ENR 50 Compounds.              | 2001/2002 |