



# Ahmad Zafir Romli, PhD

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**RESEARCH INTEREST:**

*Polymer composite systems; polymer physical, mechanical and thermal testing; polymer processing; polymer blends.*

**PERSONAL BIODATA:**

- 1) Name : Ahmad Zafir bin Romli
- 2) Nationality : Malaysian
- 3) Religion : Islam
- 4) Office address:  
Center of Polymer Composites Research & Technology (PoCResT)  
Institute of Science (IOS),  
Level 3, Block C,  
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- 7) Scopus I.D: 55157192000

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## **Experience**

### **Industrial Training (Trainee)**

- Session Nov 1998 – April 1998 Malaysia Rubber Board (MRB), Selangor
- Natural Rubber Processing and Testing Practical

### **Industrial Training (Trainee)**

- Oct 1998 – Dec 1998 – Musa Rahman Plastic, Bukit Raja, Selangor
- Extrusion process (production of HDPE pipes)

### **Industrial Training (Trainee)**

- Oct 2000 – Dec 2000 – Perlis Consolidated, Perlis
- Involving in the production of the PVC sheets using calendering machines

### **Tutor**

- May 2001 – Sept 2001 – UiTM, Shah Alam, Selangor
- Assisting lecturers to run the tutorial classes

### **Lecturer, Faculty of Applied Sciences, UiTM**

- Nov 2002 – Aug 2008

### **Senior Lecturer, Faculty of Applied Sciences, UiTM**

- Sept 2008 - Present

### **Program Coordinator – Polymer and Bio-composites Program, Faculty of Applied Sciences, UiTM**

- Oct 2011 – April 2012

### **Chairman of ICT Technical Committee – Zone W7, UiTM**

- June 2011 – June 2013

### **Head – Center of Polymer Composites Research and Technology (PoCResT), Institute of Science, UiTM**

- Aug 2012 - Present

### **Technical Advisory Committee (TAC), AdTEC Taiping**

- 29 Ogos 2016 – 28 Ogos 2018
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<b>Education</b>	April 1998	Malaysia Rubber Board	Sg. Buloh, S'gor
	▪ <b><i>Diploma in Natural Rubber Processing</i></b>		
	Nov. 1999	Universiti Teknologi Mara	Shah Alam, S'gor
	▪ <b><i>Diploma in Rubber and Plastic Technology</i></b>		
	Oct. 2001	Universiti Teknologi Mara	Shah Alam, S'gor
▪ <b><i>BSc. (Hons) Polymer Technology</i></b>			
Nov. 2002	Loughborough University	United Kingdom	
▪ <b><i>MSc. Polymer Technology (Characterisation of Structure and Physical Properties of High Performance Packaging Film)</i></b>			
April. 2012	Universiti Teknologi MARA	Shah Alam, S'gor	
▪ <b><i>PhD. In Science (The Preparation and Characteristics of Chicken Feather/ Epoxy Composites)</i></b>			

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**Honours,  
Awards and  
Showcase**

- Invention, Innovation & Design UiTM (IIDEX) – 2 Gold & 3 Silvers
  - Malaysia Technology Expo (MTE), KL – 1 Silver & 1 Bronze
  - British Invention BIS – 1 Silver
  - SME Innovation Showcase
  - Invention and Product Exposition (INPEX) – 1 Silver & 1 Bronze
  - IIDEX 2013, UiTM – 4 Silver & 1 Bronze
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**Journals**

- “The Mechanical and Physical Properties of the Polymer Feather Fibre Board Composites”, Ahmad Zafir Romli & Mohd Hanafiah Abidin, Journal Solid State Science and Technology Letters, Vol 12, No. 1 (Suppl.), 2005
  - “Blend of Expendable Polystyrene (EPS) with Epoxy Resin”, Rabiatul Manisah Mohamed, Ahmad Zafir Romli & Mohd Hanafiah Abidin, Journal Solid State Science and Technology Letters, Vol 12, No. 1 (Suppl.), 2005
  - “Blend of Expendable Polystyrene (EPS) with Epoxy Resin”, Rabiatul Manisah Mohamed, Ahmad Zafir Romli & Mohd Hanafiah Abidin, Journal Solid State Science and Technology Letters, Vol 12, No. 13, 2005
  - “The Tensile Evaluation of the Epoxy/Keratin Short Fiber as New Composites”, Ahmad Zafir Romli, Mohd Hanafiah Abidin & Hazizan Md. Akil, Scientific Research Journal, Vol. 6, No. 1, 2009
  - “‘Green’ Polymer Matrix from Renewable Resources: Preparation of Epoxidized Palm Oil – Based Epoxy Blends with Imadazole”, S.N.L. Mamaud, M. H. Abidin & A. Z. Romli, Journal of Polymers and Technologies, Vol. 3, No. 2, 2011
  - “Preparation and Impact Properties of Epoxy/ Epoxidized Palm Oil Blend Glass Fiber Reinforced Composite Systems”, S.N.L. Mamaud, M. H. Abidin & A. Z. Romli, Advanced Material Research, Vol. 282-284, 2012
  - “The Effect of Hybridization of the Glass Fiber – Flexible Modified Epoxy and Rigid Epoxy Composite Properties Under Low – Velocity Impact”, S.N.L. Mamaud, M. H. Abidin & A. Z. Romli, Advanced Material Research, Vol. 255-259, 2013
  - “Effect of Epoxidized Palm Oils Loading on the Crosslink Density and
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Rebound Resilience Characteristic of SBR Vulcanizates”, Nurul Ayunie Mohd Zaki, A. Z. Romli, M. A. Wahab & M. H. Abidin, *Advanced Material Research*, Vol. 748, 206-210, 2013

- “Effect of Tensile and Morphology Properties of Casuarina Equisetifolia Reinforced Unsaturated Polyester Composites”, Nurulaini Borhan, A. Z. Romli & M. H. Abidin, *Advanced Material Research*, Vol. 748, 211-215, 2013
  - “Tensile and Flexural Properties of Casuarina Equisetifolia Unsaturated Polyester Composites”, Nurulaini Borhan, A. Z. Romli & M. H. Abidin, *Advanced Material Research – Progress in Polymer and Rubber Technology*, Vol. 812, 231-235, 2013
  - “Effect of Rice Husk Particle Size on Tensile and Density of Recycled PPVC Composites”, Farah Nordyana Azizul Rahman, Ahmad Zafir Romli & Mohd Hanafiah Abidin, *Advanced Material Research – Progress in Polymer and Rubber Technology*, Vol. 812, 145-150, 2013
  - “Effect of Epoxidized Palm Oil (EPO) on Tensile Properties and Density of Rubber Compounding”, Anis Nazurah Mohd Nasir, Ahmad Zafir Romli, Mohd Azizol Wahab & Mohd Hanafiah Abidin, *Advanced Material Research – Progress in Polymer and Rubber Technology*, Vol. 812, 216-220, 2013
  - “Tensile Properties of Aminosilane Treated Rice Husk/ Recycled PVC Composite”, M. S. Ramle, A. Z. Romli & M. H. Abidin, *Advanced Material Research – Progress in Polymer and Rubber Technology*, Vol. 812, 151-156, 2013
  - “Effect of Epoxidized Palm Oil Loading on the Swelling and Mechanical Properties of SBR Vulcanizates”, Nurul Ayunie Mohd Zaki, A. Z. Romli, M. A. Wahab & M. H. Abidin, *Advanced Material Research – Progress in Polymer and Rubber Technology*, Vol. 812, 236-240, 2013
  - “The Effect of Carbon Black on Types of Glass Fibre in Natural Rubber Latex Composite”, Nor Aisyah Salleh, Mohd Hanafiah Abidin & Ahmad Zafir Romli, *Journal of Engineering Science*, Vol. 9, 79-87, 2013
  - “Properties of Epoxidised Palm Oil (EPO)/ Styrene Butadiene Rubber (SBR) Compound”, Anis Nazurah Mohd Nasir, Ahmad Zafir Romli & Azizol Wahab, *Advances in Environmental Biology*, Vol. 8, 2589-2599, 2014
  - “The Mechanical Properties of Rice Husk/ Recycle Plasticized Polyvinyl Chloride Composite”, Farah Nordyana Azizul Rahman, Ahmad Zafir Romli & Mohd Hanafiah Abidin, *Advances in Environmental Biology*, Vol. 8, 2615-2619, 2014
  - “The Influence of Femoral Ball Size on the Range of Motion that Fulfills the Criteria of Safe Zone Orientation Acetabular Cup”, Muhamad Faris Abd Manap, Solehuddin Shuib, Ahmad Zafir Romli & Amran Ahmed Shokri, *Jurnal Teknologi*, Vol. 76:7, 31-35, 2015
  - “Effect of Carbon Black Structures toward Heat Build-up Measurements and its Dynamic Properties”, Mohd Ismail Rifdi Rizuan, Mohammad Azizol Abdul Wahab & Ahmad Zafir Romli, *Advanced Materials Research*, Vol. 1134, 131-137, 2016
  - “Preparation and Characterization of Cellulose and Microcrystalline Cellulose Isolated from Waste *Leucaena Leucocephala* Seeds”, *International Journal of Advanced and Applied Sciences*, Vol. 3(4), 51-58, 2017
  - “Physical and Mechanical Properties of ENR Compatibilized NR/NBR Blends Reinforced Nanoclay and Nanosilica”, *Macromol. Symp.*, Vol 371, 27-34, 2017
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- "The Fibre Damage Due to the Mechanical Cutting of Treated and Untreated Short Fibre/ Unsaturated Polyester Composite", Journal of Engineering Science, Vol. 13, 63-74, 2017
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### Article & Book

- "Tiles From Eggshells?", Innovation Reports, 18<sup>th</sup> March 2010, [http://www.innovations-report.com/html/reports/materials\\_science/tiles\\_eggshells\\_151066.html](http://www.innovations-report.com/html/reports/materials_science/tiles_eggshells_151066.html)
  - "Stepping on Eggshells", Clay Technology Magazine, 30<sup>th</sup> April 2010, <http://www.iom3.org/news/stepping-eggshells>
  - **BOOK** – "Current Materials for Industrial Technologies and Engineering Practice", Editors: Rozana Mohd Dahan, Ahmad Zafir Romli, Mohd Rozi Ahmad & Dzaraini Kamarun, Trans Tech Publication, ISBN: 978-3-03835-734-6, 2016
  - **TECHNICAL BULLETIN** – Chief Editor/ Layout - Technical Bulletin of Polymer Composites Research & Technology, Polymer Composites Research & Technology Publication, ISSN: 2289-7089 – Vol 1 Issue 1, 2, 3 & 4
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### Papers and Presentations

- "Characterisation of Structure and Physical Properties of High Performance Packaging Film", M.Sc Thesis 2002
  - "Thermogravimetric Analysis (TGA); A Thermal Method of Determining Polymer Degradation", Introduction to Polymer Characterisation Course, June 2004.
  - "Development of Unsaturated Polyester and Epoxy Feather Fiber Board", *Poster Presentation* - Invention, Innovation and Design 2004 (IID 2004)
  - "The Evaluations of the Polymer 'Feather Fiber Board' Composites by the Mechanical and Physical Methods" - Colloquium on Polymeric Materials and Composite Technology 2005, February 2005
  - "Mechanical Properties of Recycled Polyethylene Terephthalate" - Polyester Composite - Colloquium on Polymeric Materials and Composite Technology 2005, February 2005
  - "Blends of Expandable Polystyrene Foam with Thermoset Resin" - Colloquium on Polymeric Materials and Composite Technology 2005, February 2005
  - "Ballistic Impact Performance Criteria of Textile Materials for Soft Body Armours" - Seminar IRPA 2005, February 2005
  - "The Potential of Natural Waste Fibre as an Energy Efficient Materials for Building" - National Seminar on Energy in Buildings 2005, May 2005
  - "Blends of Expendable Polystyrene (EPS) Foam with Thermoset Resins" - 5th National Polymer Symposium, August 2005
  - "Development of Unsaturated Polyester and Epoxy Feather Fiber Board" *Poster Presentation* - R&D IPTA 2005 Showcase, PWTC, Kuala Lumpur, 30th September - 2nd October 2005
  - "Expandable Polystyrene Foam (EPS foam) Filled Thermosets Polymer Composites", Rabiatul Manisah Mohamed, Ahmad Zafir Romli and Mohd Hanafiah Abidin, ISESEE 2006, Maya Hotel, Kuala Lumpur, 2006
  - "The Mechanical and Physical Properties of the 'Polymer Feather Fiber Board Composites", Ahmad Zafir Romli and Mohd Hanafiah Abidin, CSSR2007, Sunway Lagoon Resort, Subang Jaya, 2007
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- “The Compatibility of using Keratin Fiber from Chicken Feather as Filler for Polymers Based on the Mechanical Test”, Ahmad Zafir Romli, Mohd Hanafiah Abidin and Hazizan Md Akil, NSPM2007, UniKL, Kuala Lumpur, 2007
  - “The Drying Characteristics of the Keratin Fiber from Chicken Feather to be used as Polymer’s Filler”, Ahmad Zafir Romli, Mohd Hanafiah Abidin and Hazizan Md Akil, NSPM2007, UniKL, Kuala Lumpur, 2007
  - “The Performance of Chicken Eggshells as Particulate Filler in Epoxy”, Rassimi Abdul Ghani, Mohd Hanafiah Abidin & Ahmad Zafir Romli, Conference on Scientific & Social Research, A Famosa Resort, Melaka, 2008
  - “The Effect of Chicken Eggshell Particulates on Water Absorption Behavior and Density of Unsaturated Polyester”, Mohd Hariz Kamarudin, Ahmad Zafir Romli & Mohd Hanafiah Abidin, Conference on Scientific & Social Research, A Famosa Resort, Melaka, 2008
  - “Moisture Absorption/ Desorption Characteristic of Chicken feather to be used as filler in Epoxy Matrix”, Ahmad Zafir Romli, Mohd Hanafiah Abidin & Hazizan Md. Akil, Conference on Scientific & Social Research, A Famosa Resort, Melaka, 2008
  - “The Bending Behavior of the Chicken Feather/ Epoxy Bio-Composites (Feather Fibre Board)”, Ahmad Zafir Romli, Mohd Hanafiah Abidin & Hazizan Md. Akil, International Advanced Technology Congress (ATCi 2009), PWTC, Kuala Lumpur, 2009
  - “The Tensile Testing and Impact Testing on Low Loading Chicken Eggshell Filler Epoxy Composite”, Rassimi Abdul Ghani, Mohd Hanafiah Abidin & Ahmad Zafir Romli, Malaysia Polymer International Conference (MPIC 2009), IOI Resort, Putrajaya, 2009
  - “The Evaluation of Eggshell Particulate Size in Unsaturated Polyester via Mechanical Test”, Mohd Hariz Kamaruddin, Ahmad Zafir Romli & Mohd Hanafiah Abidin, Malaysia Polymer International Conference (MPIC 2009), IOI Resort, Putrajaya, 2009
  - “The Tensile Behavior of Epoxy/ Feather Bio-Composites”, Ahmad Zafir Romli, Mohd Hanafiah Abidin & Hazizan Md Akil, Malaysia Polymer International Conference (MPIC 2009), IOI Resort, Putrajaya, 2009
  - “The Development of Feather and Eggshell Composites as Potential New Cost Effective and Energy Efficient Material”, Ahmad Zafir Romli & Mohd Hanafiah Abidin, National Biotechnology Seminar, PWTC, Kuala Lumpur, 2010
  - “Effect of Low – Velocity Impact Damage on the Tensile Properties of Glass Fiber – Keratin Polymer”, Khairunnisa Liyana Abd. Hamid Ridza, Ahmad Zafir Romli & Mohd Hanafiah Abidin, National Symposium on Polymeric Materials, Universiti Sains Malaysia – Engineering Campus, Nibong Tebal, Pulau Pinang, 2012
  - “The Effect of Silane Coupling Agent on the Tensile Properties of Rice Husk/ Resysle PVC Composite”, M. S. Ramle, A. Z. Romli & Mohd Hanafiah Abidin, National Symposium on Polymeric Materials, Universiti Sains Malaysia – Engineering Campus, Nibong Tebal, Pulau Pinang, 2012
  - “The Effect of Carbon Black and Different Types of Glass Fiber in Natural Latex Composite”, Nor Aisyah Salleh, Mohd Hanafiah Abidin & Ahmad Zafir Romli, National Symposium on Polymeric Materials, Universiti Sains Malaysia – Engineering Campus, Nibong Tebal, Pulau Pinang, 2012
  - “The Effect of Polyimide as Filler Towards the Tensile Behaviour of The Thermoplastic Elastomer Based on LDPE and SMR L”, N. N. I.
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Nik Ibrahim, M. H. Abidin & A. Z. Romli, National Symposium on Polymeric Materials, Universiti Sains Malaysia – Engineering Campus, Nibong Tebal, Pulau Pinang, 2012

- “The Evaluation of Chemically Treated Glass Fiber Reinforcement via Tensile Test after Chemical Treatment”, Siti Nur Liyana Mamaud, Mohd Hanafiah Abidin & Ahmad Zafir Romli, National Symposium on Polymeric Materials, Universiti Sains Malaysia – Engineering Campus, Nibong Tebal, Pulau Pinang, 2012 [POSTER]
- “The Fibre Damage due to the Mechanical Cutting of Treated and Untreated Kenaf Short Fibre/ Unsaturated Polyester Composite”, National Seminar on Polymeric Materials – NSPM2016, 10-12 Oktober 2016, Universiti Sains Malaysia, Engineering Campus, Nibung Tebal, Penang
- “The Effect of Silane treatment on the Mechanical Properties of the *Casuarina Equisetifolia* (*C.equisetifolia*)/ Unsaturated Polyester Composites”, National Seminar on Polymeric Materials – NSPM2016, 10-12 Oktober 2016, Universiti Sains Malaysia, Engineering Campus, Nibung Tebal, Penang
- “The Relationship between Hardness to the Tensile Properties of Kenaf/ Unsaturated Polyester Composite”, Advanced Materials Conference – AMC2016, 28-29 November 2016, Langkawi Island, Kedah, Malaysia
- “Mechanical Properties of Three Layer Glass Fibre Reinforced Unsaturated Polyester Filled with P84 Polyimide”, Advanced Materials Conference – AMC2016, 28-29 November 2016, Langkawi Island, Kedah, Malaysia
- “Tensile Properties of Chrome Tanned Leather Waste Short Fibre Filled Unsaturated Polyester Composite”, Advanced Materials Conference – AMC2016, 28-29 November 2016, Langkawi Island, Kedah, Malaysia

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## Grants

- Recycled Plastics Reinforced Thermosets Composites – **RM 39 986.00**
  - Combinations of Recycled Solid Waste Polyethylene Terephthalate (PET), Unused factory reject polystyrene Foam and Bird Feathers with the thermoset Polymer Matrix – **RM 49 966.84**
  - Development of Flexible Composite Soft Body Armour – **RM 170 000.00**
  - The Development of Feather and Eggshell Composites as Potential New Cost Effective and Energy Efficient Material – **RM102 920.00**
  - Novel Advanced Organic Materials: Polyimides (PI) and Polyphynelenevinylene (PPV); Physical Properties – **RM 1 mil**
  - The Dynamic Ageing Behavior via Mechanical Failure on the Glass Fiber/ Keratin Filler Sandwich Thermosets Polymer Composites – **RM 36 000.00**
  - Effect of Rice Husk’s Particle Size on Physical and Mechanical Properties of Polyvinyl Chloride Composites – **RM 32 000.00**
  - Improvement of ‘KIBSU’ IBS load bearing Wall Panel for Production and Onsite Applications – **RM30 000.00**
  - Characterization of Glass Fiber Reinforced Unsaturated Polyester Filled P84 Polyimide/ Multi-wall Carbon Nanotube (MWCNT) Composites – **RM53 000.00**
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- Finite Element Modeling of Uncemented Hip Stem Primary Fixation: The Effect of Bone Visco-elastic Properties to the Interference Fit – **RM20 000.00**
  - Identification of Low Diffuse Reflective Marker for Motion Capture Application in Teaching and Learning Environment – **RM20 000.00**
  - The Preparation and Characterization of Recycle Waste Chrome Tanned Leather Reinforced Unsaturated Polyester Composite – **RM 18 600**
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## **Patents**

### **Patent award**

- A Protective Body Armour

### **Patent filing**

- A Method for Producing a Composite Material from Avian Feather (UI201100554)
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## **Students supervisions**

### **Under Graduate (Bachelor of Science (Hons.))**

- Final Year Project Supervision since 2003 – Present

### **Post Graduate (MSc.)**

- 9 students as main supervisor
- 3 students as co-supervisor
- GRADUATED: 2 Main & 3 Co

### **Post Graduate (PhD.)**

- 2 students as main supervisor
  - 2 student as co-supervisor
  - GRADUATED: 1 Main & 1 Co.
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## **Consultations**

- Bearlocher (M) Sdn Bhd.
  - TOYO Tyre (M) Sdn. Bhd.
- 

## **Professional Bodies**

- World Society of Sustainable Energy Technologies (WSSET)