

Sr. Lecturer

DR ZUNAIDA ZAKARIA



Contact Details

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Professional Experience:

Chairperson of Degree Programme (Polymer Engineering), School of Materials Engineering, UniMAP, 2015 - present

Researcher, Centre of Excellence Geopolymer & Green Technology (CeGeoGTech), UniMAP 2013 - present

Editorial Member of International Journal of Nanoelectronics and Materials (IJneaM) 2017 - present

Senior Lecturer, School of Materials Engineering, UniMAP 2013 - present

Research Contributions:

My expertise lies in the field of polymeric foams and real-time measurement of deformation mechanism in syntactic foams. I am an expert in polymeric foam and syntactic foam processing such as, LDPE foam, LLDPE foam, rubber foam and epoxy foam and focusing on their failure mechanism during compression stress. I am also considerable expertise in modelling and simulation of polymeric foam which is done my doctorate in this field. Current researches include:

Teaching Contributions:

Courses taught are in the areas of: Polymers, Design and Capstone project

Current and Recent Researchers:

Current Research Students

1. Anusha Leemsuthep A/P Am Phan 2014 (MSc): Sodium Bicarbonate as Blowing Agent on Morphology and Properties of Conductive Epoxy Micro-Balloon Prepared by Emulsion System- Completed –Main supervisor

Some Recent Research Students

1. Nurul Ain Binti Mohd Nayan 2014 (MSc): Hybrid Conductive Fillers in Production and Utilization of Conductive Epoxy Microballoon- Completed – Co-supervisor
2. Mohammad Syahrin Bin Smail 2015 (PhD): Fundamental Study on Preparation and Characterization of Green Cellular Latex Foam Using Food Grade Blowing Agent – On going – Co-supervisor
3. Anusha Leemsuthep A/P Am Phan 2018 (PhD): Sodium Bicarbonate as Blowing Agent on Morphology and Properties of Conductive Epoxy Micro-Balloon Prepared by Emulsion System- Completed –Co-supervisor

Honours, Awards and Memberships:

- 2018** SILVER medal at International Engineering Invention & Innovation Exhibition (i-ENVEX)
- 2017** Editorial Member of International Journal of Nanoelectronics and Materials (IJneaM)
- 2016** Anugerah Perkhidmatan Cemerlang (APC), Universiti Malaysia Perlis, 2016
BRONZE medal at International Invention, Innovation & Technology Exhibition (ITEX 2016)
GOLD medal at International Engineering Invention & Innovation Exhibition (i-ENVEX) 2016
GOLD medal at 2016 Bangkok International Intellectual Property, Invention, Innovation and Technology Exposition" (IPITEX 2016)
- 2015** GOLD medal at Ekspo Rekacipta Dan Pameran Penyelidikan Unimap (Ereka) 2015
Member of Institution of Mechanical Engineers (IMechE)- 80265516
- 2014** BRONZE medal at Ekspo Rekacipta & Pameran Penyelidikan UniMAP 2014
Graduate Member, The Institution of Engineers, Malaysia (IEM)
- 2013** BRONZE medal at Ekspo Rekacipta & Pameran Penyelidikan UniMAP 2013
GOLD medal at International Invention, Innovation & Technology Exhibition (ITEX 2013)
GOLD medal at 13th International Conference and Exposition on Invention of Institutions of Higher Learning PECIPTA 2013.
SILVER medal at International Engineering Invention & Innovation Exhibition (i-ENVEX 2013)
SILVER medal at Materials Exhibition 2013 (MATEX 2013)
Associate Member of Plastic & Rubber Institute Malaysia

Research Funding:

Over the past five (5) years, extensive research funding has been received from the Ministry of Higher Education (MOHE), Industry and other sources. Funding has been received for materials procurement, experimental set-up, equipment and etc.

Industry –MB Emas Sdn Bhd (2018-2019)

Fundamental Research Grant (FRGS) (2014 – 2017)

Research Acculturation Grant Scheme (RAGS) (2013-2016)

Exploratory Research Grant Scheme (ERGS) (2013-2015)

Selected Publications:

Recent Journal

1. Leemsuthep, A., Nayan, M., Ain, N., Zakaria, Z., Lan, U. and Ngoc, D., 2017, February. Effect of Sodium Bicarbonate in Fabrication of Carbon Black - Filled Epoxy Porous for Conductive Application. In *Macromolecular Symposia* (Vol. 371, No. 1, pp. 44-49).
2. Nayan, N.A.M., Leemsuthep, A., Zakaria, Z., Lan, U. and Ngoc, D., 2017, February. Preparation of Epoxy Composite Hollow Microspheres (ECHM) Using Toluenesulfonyl Hydrazide (TSH) as Blowing Agent. In *Macromolecular Symposia* (Vol. 371, No. 1, pp. 94-100).
3. Ariff, Z.M., Zakaria, Z., Bakar, A.A. and Naser, M.A.M., 2016. Effectiveness of A Simple Image Enhancement Method in Characterizing Polyethylene Foam Morphology using Optical Microscopy. *Procedia Chemistry*, 19, pp.477-484.

Recent Conference

1. Zunaida Zakaria and Chu Rong Yao “Compressive Stress of Syntactic Foam: Effect of rNBR Particles Reinforced Epoxy Macrospheres (rNBR-EM)”, International Conference on Sustainable Materials (ICoSM) 2018, Bangkok, Thailand.
2. Nayan, N.A.M., Leemsuthep, A., Zakaria, Z. and Uy Lan, D.N., 2017, February. Preparation of epoxy composite hollow microspheres (ECHM) using toluenesulfonyl hydrazide (TSH) as blowing agent. 10th International Materials Technology Conference & Exhibition (IMTCE 2016)
3. L. Anusha, M.N. Nurul Ain, Z. Zakaria and Du Ngoc Uy Lan, “Morphology and Conductive Properties of Carbon Black- and Graphite-Filled Conductive Epoxy Micro-porous”, 10th International Materials Technology Conference & Exhibition (IMTCE 2016)