



## CURRICULUM VITAE

### PROF. DR. EDI SYAMS BIN ZAINUDIN

Department of Mechanical & Manufacturing Engineering  
 Faculty of Engineering  
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 MALAYSIA



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 Google Scholar: <https://scholar.google.com/citations?user=uBUeBLYAAAAJ&hl=en&oi=ao>

### ACADEMIC QUALIFICATIONS

2009 Universiti Putra Malaysia  
**Ph.D in Materials Engineering**  
 2002 Universiti Putra Malaysia  
**MSc. in Structural Materials**  
 1998 Universiti Kebangsaan Malaysia  
**Bachelor Engineering in Mechanical & Materials Engineering**

### AREA OF INTEREST

Mechanical & Materials Engineering, Composite Materials

### EXPERIENCE AND SPECIALIZATION

#### ACADEMICS APPOINTMENTS

No.	Designation	University	Duration
1.	Professor	Universiti Putra Malaysia	April 2024- to date
2.	Assoc. Professor	Universiti Putra Malaysia	Aug 2012 - Mar 2024
3.	Senior Lecturer	Universiti Putra Malaysia	June 2008 - July 2012
4.	Lecturer	Universiti Putra Malaysia	Aug. 2003 - May 2008
5.	Tutor	Universiti Putra Malaysia	Jan. 2000 - July 2003

#### ADMINISTRATIVE DUTIES

No	Designation	Department/Faculty/Institution	Year
1.	<i>Panel Penilai Permohonan Skim Geran Penyelidikan Peringkat Universiti</i>	Pusat Pengurusan Penyelidikan (RMC), UPM	2023-2024
2.	Deputy Dean, Postgraduate Studies	Faculty of Engineering, UPM	2022-2024
3.	Program Coordinator, <i>Doktor Kejuruteraan (D.Eng)</i>	Faculty of Engineering, UPM	2022-2024
4.	Associate Researcher	INTROP, UPM	2022-2024

5.	Head, Laboratory of Biocomposite Technology	INTROP, UPM	2022
6.	Committee Member, <i>Jawatankuasa Kecil Pelantikan Penyelia &amp; Pemeriksa Tesis Pelajar</i>	School of Graduate Studies, UPM	2022 - 2025
7.	Pemeriksa Kira-Kira	Persatuan Pembangunan dan Industri Enau Malaysia (PPIEM)	2022 - 2023
8.	Chief Jury, 3 Minutes Thesis Competition	Faculty of Engineering	2022
9.	Chief Jury, 3 Minutes Thesis Competition	Faculty of Engineering	2020
10.	Committee Member, Application for Upgrade from Master to PhD	Faculty of Engineering	2021
11.	Coordinator, Postgraduate	Department of Mechanical & Manufacturing Engineering	2021 - 2023
12.	Associate Researcher	INTROP, UPM	2020-2022
13.	Committee Member, Application for Upgrade from Master's Program to PhD	INTROP, UPM	2019
14.	Coordinator, Postgraduate	Department of Mechanical & Manufacturing Engineering	2019 - 2021
15.	Exco, <i>Pendidikan dan Penyelidikan</i>	Persatuan Pembangunan dan Industri Enau Malaysia (PPIEM)	2019
16.	<i>Ahli Penyelidik Utama</i>	Advanced Engineering Materials and Composites Research Center (AEMC)	2019
17.	Associate Researcher	INTROP, UPM	2019
18.	Coordinator, Research	Department of Mechanical & Manufacturing Engineering	2016-2017
19.	Visiting Lecturer	Faculty of Engineering, Brunel University, UK	2013-2014
20.	Committee Member, <i>Rundingan Harga Perolehan Secara Rundingan Terus bagi Aksesori Veneer Drying Autofeeder</i>	INTROP, UPM	2013
23.	Advisor, Student Competition SAMPE Asia 2012	INTROP, UPM	2012
24.	Committee Member, <i>Penilaian &amp; Pemantauan Laporan Kemajuan Geran Penyelidikan</i>	INTROP, UPM	2012
25.	Internal Auditor, <i>Jawatankuasa Keselamatan, Kesihatan &amp; Persekitaran Tempat Kerja</i>	INTROP, UPM	2012
26.	Committee Member, Management	INTROP, UPM	2011-2012
27.	Committee Member, Research	INTROP, UPM	2011-2012
28.	Committee Member, Postgraduate	INTROP, UPM	2011-2012
29.	Secretariat, R&D Research Project with MyKenaf Sdn. Bhd.	INTROP, UPM	2011
30.	Committee Member, <i>Pembentukan</i>	Faculty of Engineering	2011

<i>Program Siswazah Bahan Komposit Lanjutan</i>			
31.	Head, Laboratory of Biocomposite Technology	INTROP, UPM	2011-2013
32.	Program Manager, Hybrid Biocomposite	INTROP, UPM	2010-2011
33.	Chair, Committee to Establish INTROP as Centre of Natural Fiber	INTROP, UPM	2011-2013
34.	Chair, <i>Jawatankuasa Hubungan Industri &amp; Pengantarabangsaan</i>	INTROP, UPM	2011-2012
35.	UPM Representative, Research Focus Group R&D Kenaf	UPM and Lembaga Kenaf & Tembakau Negara (LKTN)	2010
36.	Panels & Assessors, <i>Penilaian, Pengurusan Kerja (PPK), Jawatan Pegawai Penyelidik</i>	Universiti Putra Malaysia	2010
37.	Associate Researcher	ITMA, UPM	2010
38.	Committee, Curriculum Review	Department of Mechanical & Manufacturing Engineering	2009-2010
39.	Coordinator, <i>Makmal Gunasama</i>	Faculty of Engineering, UPM	2009-2011
40.	Coordinator, Final Year Project	Department of Mechanical & Manufacturing Engineering	2009-2010
41.	Associate Researcher	ITMA, UPM	2009
42.	Coordinator, CAD/CAM Laboratory	Faculty of Engineering	2005-2006
43.	Committee Member, Workshop on Advanced Materials & Nanotechnology	ITMA, UPM	2005

#### **INVOLVEMENT IN CONFERENCES/PROCEEDINGS**

<b>No</b>	<b>Designation</b>	<b>Conference</b>	<b>Year</b>
1.	Treasurer	1 <sup>st</sup> International Conference on Advanced Engineering Materials & Composites (ICAEMC 2024)	2024
2.	Committee Head, Logistic	24 <sup>th</sup> International Conference on Advances in Materials & Processing Technologies (AMPT 2023)	2023
3.	Treasurer	International Symposium of Polymeric Materials 2021 (ISPM)	2022
4.	Co-Chairman	International Conference on Sugar Palm and Allied Fibre Polymer Composites (SAPC2021)	2021
5.	Treasurer	International Symposium of Polymeric Materials (ISPM)	2020
6.	Scientific Committee	14 <sup>th</sup> International Seminar on Polymer Science and Technology (ISPST)	2020
7.	Committee Member, Technical	International Conference on Advances in Mechanical & Manufacturing Engineering (ICAM <sup>2</sup> E)	2019
9.	Committee Member	Seminar Enau Kebangsaan	2019
10.	Chairman	Kolokium Penyelidikan INTROP	2015
11.	Committee Member	Postgraduate Seminar on 4 <sup>th</sup> Natural Fibre Composites, Dept of Mech Engineering	2014
12.	Chairman, Technical Committee	International Conf. on Kenaf & Allied Fibres (ICKAF)	2013
13.	Committee Member, Promotion & Publicity	International Conference on Advances in Mechanical & Manufacturing Engineering (ICAM <sup>2</sup> E)	2013
14.	Co-Chairman	Kolokium Penyelidikan INTROP	2012

No	Designation	Conference	Year
1.	Treasurer	1 <sup>st</sup> International Conference on Advanced Engineering Materials & Composites (ICAEMC 2024)	2024
15.	Organizing Committee	UPM-UNIKL Nuclear Agency Symposium	2011
16.	Chairman	INTROP Public Talk Series	2011
17.	Head, Support Committee	8 <sup>th</sup> International Conference on Composite Science & Technology (8ICCST)	2010
18.	Member of Editorial Board	9 <sup>th</sup> National Symposium on Polymeric Materials (NSPM)	2009
19.	Committee Member, Logistic, Accommodation & Food	9 <sup>th</sup> National Symposium on Polymeric Materials (NSPM)	2009
20.	Editor	International Symposium on Polymeric Materials (ISPM)	2022
21.	Editor	Seminar Enau Kebangsaan	2019
22.	Editor	2 <sup>nd</sup> UPM-UniKL Symposium on Polymeric Materials	2013
23.	Editor	8 <sup>th</sup> International Conference on Composite Science & Technology (8ICCST)	
24.	Editor	UPM-UNIKL Nuclear Agency Symposium	2011
25.	Editor	9 <sup>th</sup> National Symposium on Polymeric Materials	2009
26.	Chair Session	International Symposium on Polymeric Materials (ISPM)	2022
27.	Chair Session	Seminar Enau Kebangsaan	2019
28.	Chair Session	Kolokium Penyelidikan INTROP	2015
29.	Chair Session	Kolokium Penyelidikan INTROP	2012
30.	Chair Session	Kolokium Penyelidikan INTROP	2010
31.	Chair Session	9 <sup>th</sup> National Symposium on Polymeric Materials (Parallel Session C2)	2009
32.	Chair Session	9 <sup>th</sup> National Symposium on Polymeric Materials (Parallel Session C3)	2009
33.	Judge	International Symposium on Polymeric Materials (ISPM)	2022
34.	Judge	International Conference on Sugar Palm and Allied Fibre Polymer Composites (SAPC)	2021
35.	Judge	Seminar Enau Kebangsaan	2019
36.	Judge	Kolokium Penyelidikan INTROP	2015
37.	Judge	Kolokium Penyelidikan INTROP	2010
38.	Judge	8 <sup>th</sup> International Conference on Composite Science & Technology (8ICCST)	2010
39.	Judge	9 <sup>th</sup> National Symposium on Polymeric Materials (NSPM)	2009

#### **PROFESSIONAL/ACADEMIC AFFILIATIONS**

No	Role	Association/Organization/Body	Year
1.	Associate Member	Majlis Profesor Negara	Since 2020
2.	Graduate Member	Board of Engineers, Malaysia	Since 2002
3.	Member	Institute of Material Malaysia (IMM)	2004 - 2009
4.	Member	Persatuan Industri Komposit (PIK)	2011 - 2017
5.	Member	Alumni Society, UPM	2006 – to date
6.	Member	Society of Academician (PPA), UPM	2004 – to date
7.	Member	Sport and Social Club, Faculty of Engineering, UPM	2007 – to date
8.	Committee Member	The International Scientific Society of Food, Agriculture and Environment (ISFAE)	2008 - 2017
9.	Member	Society for the Advancement of Material and Process Engineering (SAMPE)	2008-2010
10.	Exco Member	Persatuan Pembangunan Industri Enau Malaysia	2019 - 2022
11.	Penyelidik Utama	Advanced Engineering Material & Composites,	2019 - to date

**TEACHING**

No	Code	Courses	Semester & Session	No's of student	Credit
1.	KMP3105	Adv. Strength of Materials	Nov 02/03	<40	3
2.	KMP3101	Strength of Materials	Nov 02/03	<40	3
3.	KMP3401	Engineering Materials	May 03/04	>40	3
4.	KMP1401	Engineering Materials	Nov 03/04	<40	1
5.	KBP1604	Fire and Prevention	Nov 03/04	<40	1
6.	KKK3012	Engineering Mathematics 2	Nov 03/04	>40	3
7.	KBP1401	Engineering Materials	May 04/05	>40	1
8.	KMP3005	Tool Engineering	Sem1 04/05	<40	3
9.	KMP3401	Engineering Materials	Sem1 04/05	>40	3
10.	KMP3511	Engineering Mechanics	Sem2 04/05	>40	4
11.	KMP3101	Strength of Materials	Sem2 04/05	>40	3
12.	EMM3104	Dynamics	Sem2 08/09	>40	3
13.	KMP3305	Advanced Fluid Mechanics	Sem2 08/09	>40	3
14.	EMM3312	Fluid Mechanics 2	Sem1 09/10	>40	3
15.	EMM3390	Fluid Mechanics	Sem1 09/10	>40	3
16.	EMM3108	Strength of Materials 1	Sem2 09/10	>40	3
17.	EMM3290	Thermodynamics	Sem2 09/10	>40	3
18.	EMM3312	Applied Fluid Mechanics	Sem1 10/11	>40	3
19.	EMM3108	Strength of Materials 1	Sem1 10/11	>40	3
20.	EMM3290	Thermodynamics	Sem2 10/11	>40	3
21.	EMM3312	Applied Fluid Mechanics	Sem1 11/12	>40	3
22.	EMM3302	Fluid Mechanics	Sem2, 11/12	>40	3
23.	EMM3312	Fluid Mechanics 2	Sem1 12/13	>40	3
24.	EMM3302	Fluid Mechanics	Sem2 12/13	>40	3
25.	EMM4302	Tribology	Sem2 14/15	<40	3
26.	EMM3108	Strength of Materials 1	Sem1 15/16	>40	3
27.	EMM3408	Strength of Materials 2	Sem 2 15/16	<40	3
28.	EMM3108	Strength of Materials 1	Sem1 16/17	>40	3
29.	EMM3210	Thermodynamics 2	Sem2 16/17	<40	3
30.	EMM3302	Fluid Mechanics	Sem1 18/19	<40	3
31.	EMM3408	Strength of Materials 2	Sem1 18/19	<40	3
32.	EMM4302	Tribology	Sem2 18/19	<40	3
33.	EMM3213	Thermodynamics 1	Sem1 19/20	>40	3

34.	EMM3410	Strength of Materials 2	Sem1 19/20	<40	3
35.	EMM3306	Fluid Mechanics 2	Sem2 19/20	<40	3
36.	EMM3122	Engineering Materials	Sem1 20/21	<40	3
37.	EMM3410	Strength of Materials 2	Sem1 20/21	<40	3
38.	EMM3306	Fluid Mechanics 2	Sem2 20/21	<40	3
39.	EMM3124	Engineering Materials	Sem1 21/22	<40	3
40.	EMM3808	Mech. Engineering Lab 2	Sem1 21/22	<40	1
41.	EMM3810	Mech. Engineering Lab 3	Sem2 21/22	<40	1
42.	EMM3226	Thermodynamics 1	Sem1 22/23	<40	3
43.	EMM3418	Strength of Materials 2	Sem2 22/23	<40	3

## STUDENT SUPERVISION AND EVALUATOR

### SUPERVISION

#### **PHD (CHAIRMAN)**

No.	Name	Thesis Title	Graduated Year
1.	Sity Ainy binti Nor Mohamed (Malaysian)	Effect of Different Stress Ratio on Fatigue Crack Propagation of Rice Husk Polypropylene Composites Under Constant Amplitude Loading	2021
2.	Naveen Jesu Arockiam (Indian)	Development and Characterization of Kevlar/Cocos Nucifera L. Sheath/Epoxy Hybrid Composites and Graphene Nanoplatelet-Modified Hybrid Nanocomposites for Ballistic Applications	2019
3.	Isuwa Suleiman Aji (Nigerian)	Mechanical and Thermal Characterization of Hybridized Short Kenaf/Pineapple Leaf Fiber Reinforced High Density Polyethylene Composite	2012
4.	Liu Jiajia (China)	Blockchain-Based Process Collaboration Method in Manufacturing Industry	On-going
5.	Zakiah binti Sobri (Malaysian)	Characterization of Biosynthesized Zinc Oxide Nanoparticles Pulp for Antimicrobial Packaging Paper	On-going
6.	Sabrina Annuar	Characterization of banana and palm oil EFB hybrid composite for insulation board application	On-going

#### **PHD (MEMBER)**

No.	Name	Thesis Title	Graduated Year
1.	Mohd Azlin Bin Mohd Nor (Malaysian)	Development and Characterization of Woven Kenaf/Polyester Reinforced PLA Hybrid Composites	2023
2.	Mohamad Hazrol Md Damiri (Malaysian)	Development and Characterization of Corn/Kenaf Fiber Reinforced Corn Starch Hybrid Composites	2023
3.	Tarique Jamal (Indian)	Development and Characterization of Arrowroot (Maranta Arundinacea) Fiber Reinforced Thermoplastic Arrowroot Starch Biocomposites	2022
4.	Aliyu Isah (Nigerian)	Development and Characterization of Sugarcane Palm Fibre Ash Particle Reinforced Aluminium A2009 Matrix Composites	2023
5.	Budati Sindhu (Indian)	AI Algorithm for Process Parameters Optimization During the Drilling Process of Novel Green Composite in the Application of UAV (Unmanned Aerial Vehicles) Vehicles	On-going
6.	Nor Azlina Binti Ramlee	Development of Oil Palm Empty Fruit Bunch /Sugarcane Bagasse Fiber Based Hybrid Composites Insulation	2022

	(Malaysian)	Board for Potential Building Applications	
7.	Sherwani Shah Faisal Khan (Indian)	Development and Characterization of Sugar Palm [Arenga Pinnata (Wurmb.) Merr]/Glass Fiber Reinforced Poly(Lactic Acid) Hybrid Composites For Motorcycle Components	2022
8.	Elfarizanis binti Baharudin (Malaysian)	Microwave Absorber Based on Biocomposites Derived from Agricultural Wastes with Reinforcement of Poly Lactic Acid	2021
9.	Mohd Supian bin Abu Bakar (Malaysian)	Crashworthiness Performance of Kenaf/Glass Fibre-Reinforced Epoxy Hybrid Composite Filament Winding Tube	2020
10.	Alaaeddin M. H. Abed (Palestinian)	Development and Characterization of Sugar Palm Fiber-Reinforced Polymer Composites for Photovoltaic Backsheet Material	2020
11.	Mohamed Ibrahim J Ibrahim (Libyan)	Characterization of Corn/Sugar Palm Fiber-Reinforced Corn Starch Biopolymer Hybrid Composites	2020
12.	Noryani binti Muhammad (Malaysian)	Regression Analysis Framework for Material Selection of Natural Fibre-Reinforced Polymer Composites	2020
13.	Sujith Bobba (Indian)	Mechanical Characterization of S-Glass and E-Glass Reinforced Epoxy Composite Elbow Pipe Joints Submerged in Sea Water	2019
14.	Mohd Hanafee bin Zin (Malaysian)	Performance of Pineapple Leaf/Glass Fibre-Reinforced Vinyl Ester Composites Utilising Automated Spray Up Technique	2019
15.	Ahmad Ilyas bin Rushdan (Malaysian)	Properties of Sugar Palm Nanocellulose Fibre-Reinforced Biopolymer Composite	2019
16.	Mukhtar Isma'ila (Nigerian)	Glass/Sugar Palm [Arenga Pinnata (Wurmb. Merr.)] Fibre-Reinforced Polypropylene Hybrid Composite for Automotive Side Door Impact Beam	2018
17.	Syeed Saifulazry Osman Al Edrus (Malaysian)	Micro and Nanocrystalline Cellulose Fibre-Reinforced Jatropha Oil-Based Polyurethane Composite Films	2018
18.	Mohd Fairuz b Abd Manab (Malaysian)	Mechanical Properties of Pultruded Kenaf Fibre-Reinforced Vinyl Ester Composites	2016
19.	Ridwan bin Yahaya (Malaysian)	Mechanical and Ballistic Properties of Natural Fibre-Aramid Hybrid Laminated Composites	2016
20.	Mohd Azaman Md Deros (Malaysian)	Injection Moulding Simulation of Wood-Filled Polypropylene Thin-Walled Composite Parts	2015
21.	Basheer Ahmed Ahmed Ali (Indian)	Web-Based Expert System for Material Selection of Natural Fiber-Reinforced Polymer Composites	2015
22.	Khairul Azhar bin Mohammad (Malaysian)	Effect of Dwell Period on Fatigue Life Of 316l Stainless Steel Tube at High Temperature Under Creep Condition	2015
23.	Saeed Rahmanian (Iranian)	Mechanical and Thermal Characterization of Multiscale Carbon Nanotube Polypropylene and Epoxy Composites	2015
24.	Muhd Ridzuan bin Mansor (Malaysian)	Concurrent Conceptual Design of Hybrid Natural/Glass Fiber Reinforced Thermoplastic Composites for Automotive Parking Brake Lever	2015
25.	Yusriah binti Lazim (Malaysian)	Development and Characterisation of Betel Nut Husk Fibre-Reinforced Vinyl Ester Composites	2014
26.	Sahari bin Japar (Malaysian)	Characterization and Development of Biopolymers Derived from Arenga Pinnata And Their Biocomposites	2013
27.	Yousuf Ali Gumaan El-Shekeil (Yemen)	Properties of Short Kenaf Fiber-Reinforced Thermoplastic Polyurethane Composites	2012
28.	Dandi Bachtiar	Mechanical and Thermal Properties of Short Sugar Palm	2012

(Indonesian)

(Arenga Pinnata Merr.) Fibre-Reinforced High Impact Polystyrene Composites

**MASTER (CHAIRMAN)**

No.	Name	Thesis Title	Graduated Year
1.	Zakiah binti Sobri (Malaysian)	Simultaneous Synthesis and Incorporation of Zinc Oxide Particles in Bamboo Pulp Through Chemical and Biological Methods for Antimicrobial Paper	2021
2.	Naziratulaskin Abu Kassim (Malaysian)	Effect of Maceration Time on Characteristics of Acid-Hydrolyzed Cellulose from Pineapple Leaf	2018
3.	Farah Hanan binti Abd Malek (Malaysian)	Effects of Fibre Ratio and Additives on Properties of Pultruded Kenaf/Glass Fibres Phenolic Hybrid Composites	2016
4.	Ahmad Khuzairi bin Sudari (Malaysian)	Effects of Cationic, Anionic and Non-Ionic Surfactants on Properties of HDPE/LDPE/Cellulose Biocomposites	2016
5.	Umar bin Abdul Hanan (Malaysian)	Effects of Accelerated Weathering on Kenaf-Reinforced High Density Polyethylene Composite	2012
6.	Mohd Firdaus bin Abd Rahman (Malaysian)	Thermo-Mechanical Properties of Kenaf-Filled Unplasticized Polyvinyl Chloride Composites	2012

**MASTER (MEMBER)**

No.	Name	Thesis Title	Graduated Year
1.	Nur Marliana binti Mohamad (Malaysian)	Effect of Immersion Treatment of Fibre on Mechanical Properties of Pultruded Kenaf Vinyl Ester Composites	2017
2.	Nor Atirah bt Mohd Aridi (Malaysian)	Mechanical and Morphological Properties of Rice Husk-Filled Polypropylene Composites with Struktol Compatibiliser	2017
3.	Mohd Yusoff bin Mohd Haris (Malaysian)	Applicability of Kenaf-Based Hybrid Composite for Aircraft Radome	2015
4.	Nor Hanifawati binti Inai (Malaysian)	Mechanical and Physical Properties of Hybrid Banana Pseudostem/Glass Fiber-Reinforced Polyester Composites	2013
5.	Reza Mehryari Lima (Iranian)	Energy Absorption Capacity of Circular Hybrid Tube Made from Mild Steel and Glass Fiber-Reinforced Polyester Under Axial Quasi-Static Load	2012
6.	Mohd Yusoff bin Salleh (Malaysian)	Mechanical and Physical Properties of Laminated Hybrid Sugar Palm and Glass Fibre-Reinforced Unsaturated Polyester Composites	2012
7.	Mohd Fairuz b Abd Manab (Malaysian)	Development of Material Selection Expert System for Polymer-Based Composite Materials	2011

**MASTER WITHOUT THESIS**

No.	Name	Project Title
1.	Shada Khaled Mohamed Alhaj	Implementation of Total Quality Management
2.	Edwin O. Bestman	Factors Affecting Total Quality Management In The Liberian Building Construction Industry
3.	Nur Hussein Aziz	Waste Management in Malaysia Construction Industry
4.	Azwin Anisa Binti Azhar	The Impact of Supply Chain in Manufacturing Industries Due to Covid-19 Pandemic
5.	Amir Aizat Bin Mohd Sahak	Risk Analysis on the Impact of Pandemic towards Private Residential Construction Project

6.	Zatil Hazika Binti Kamaruddin	Investigation of Recycled Paper Management in Malaysian Universities
7.	Zhao Xueying	Recent development of MRT2 station: Impact to UPM & surrounding communities
8.	Mohd Firdaus Rostam	Awareness of ISO 9001 Among Staff in Organization
9.	Yuveraaj Karuppiah	Mechanical Properties of High-Performance Concrete
10.	R.Ravendran A/L Ramakrishnan	Mechanical Properties of Oil Palm Empty Fruit Bunch Fiber Reinforced Polyester Composite
11.	Alimmi Fuzail Bin Mah Hussin	Automotive Leaf Spring Using Kenaf Fibre Composite

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### **EXAMINER/EVALUATOR**

#### **INTERNAL EXAMINER (PHD)**

<b>No.</b>	<b>Name</b>	<b>Category</b>	<b>Status/Graduated Year</b>
1.	Sina Ghaffari	Chairman	Thesis Submitted
2.	Saleh Naji Musaed Alsubari	Chairman	Thesis Submitted
3.	Nor Izaida binti Ibrahim	Chairman	Thesis Submitted
4.	Ali Raqee Abdulhadi	Chairman	Thesis Submitted
5.	Leong Shii Jang	Chairman	2024
6.	Al Saadawi Husam Yahya Imran	Chairman	2024
7.	Balbir Singh	Chairman	2024
8.	Singh Spoorthi	Chairman	2024
9.	Ma Yumeng	Chairman	2024
10.	Mohd Fahmi bin Mad Ali	Chairman	2024
11.	Ahmad Safwan bin Ismail	Member	2024
12.	Tay Chai Hua	Member	2024
13.	Abotbina Walid A M	Member	2023
14.	Nurul Ain binti Maidin	Member	2023
15.	Ahmad Tarmezee bin Talib	Member	2023
16.	Norsuhaili binti Kamairudin	Member	2023
17.	Albogami Saad Muslet S	Chairman	2023
18.	Anene Franklin Amaechi	Member	2023
19.	Lai Lai Win	Chairman	2022
20.	Mohamad Omar Syafiq bin Razali	Chairman	2022
21.	Al Rubaiawi Huda Mohammed Sabbar	Chairman	2022
22.	Albogami Saad Muslet S	Chairman	2023
23.	Elias Randjbaran	Member	2022
24.	Waqas Ashraf	Member	2022
25.	Nazrin Nurarief Mardi bin Asmawi	Member	2022
26.	Msebawi Muntadher Sabah Abdul Hussein	Member	2022
27.	Huong Pei Zam	Member	2022
28.	Masrat Rasheed	Member	2022
29.	Mohd Izwan bin Shaharuddin	Member	2022
30.	Fathi Aluhishi Muftah Masoud	Member	2022
31.	Nur Aqilah binti Sairy	Member	2022
32.	Mohammad F F S Alazemi	Chairman	2022
33.	Zatil Hazrati binti Kamaruddin	Member	2022
34.	Habeeb A H R Aladwani	Chairman	2022
35.	Fahad Kh A O H Alazemi	Chairman	2021
36.	Muhammad Asyraf bin Muhammad Rizal	Member	2021
37.	Mohd Na'im bin Abdullah	Chairman	2021
38.	Ayu Rafiqah binti Shafi	Member	2021
39.	Nor Salwa binti Hamdan	Member	2021
40.	Muhamad Hasfanizam bin Mat Yazik	Chairman	2021
41.	Nuzaimah Mustafa	Member	2021

42.	Mohd Hafiezal bin Mohd Radzi	Member	2020
43.	Nik Syamsul Bahari bin Che Yusof	Member	2020
44.	Mohd Adrinata bin Shaharuzaman	Member	2020
45.	Siti Marhainis binti Abu Mansor	Member	2020
46.	Chee Siew Sand	Member	2020
47.	Davood Zamani	Member	2020
48.	Noor Azammi b. Abd Murat	Member	2020
49.	Nurain binti Hashim	Member	2019
50.	Fnyees S M D A Alajmi	Chairman	2019
51.	Muhammad Huzaifah bin Mohd Roslim	Member	2019
52.	Mahmood bin Ali	Chairman	2019
53.	Aisyah Humaira binti Alias	Member	2019
54.	Fatimah Athiyah binti Sabaruddin	Member	2019
55.	Mohd Firdaus bin Abd Rahman	Member	2019
56.	Mohamed Mohamed M Alkateb	Chairman	2019
57.	Ramengmawii	Member	2019
58.	Cik Suhana binti Hassan	Chairman	2018
59.	Mohd Nurazzi bin Norizan	Member	2018
60.	Zahra Dashtizadeh	Member	2018
61.	Alabi Abdulmumin Akoredeley	Member	2018
62.	Siti Hasnah binti Kamarudin	Member	2018
63.	Hammajam A. Abba	Member	2018
64.	Nor Aiman bin Sukindar	Chairman	2018
65.	Nasser Abd-Ullah Mohammed	Member	2018
66.	Nor Mazlana binti Main	Member	2018
67.	Ahmed Faraj Ibrahim Hissen Edhirej	Member	2018
68.	Nima Ghamarian	Member	2018
69.	Mohammed Sabah Ali	Member	2017
70.	Nawras Haidar Mostafa Al-Said Haidar	Member	2017
71.	Mastura binti Mohammad Taha	Chairman	2017
72.	Mohammed W. Muhieldeen Al-Gailani	Chairman	2017
73.	Mohd Asim Khan	Member	2017
74.	Bushra Rashid Mohammed	Member	2017
75.	Ali Hassanzadeh Lilehkoohi	Member	2017
76.	Suhad Dawood Salman	Member	2017
77.	Munir Faraj Almabrauk	Member	2017
78.	Naheed Saba	Member	2017
79.	Nadlene binti Razali	Member	2017
80.	Harmaen b. Ahmad Saffian	Chairman	2016
81.	Nurhaniza binti Mohamad	Member	2016
82.	Mohammed Serdah M	Chairman	2016
83.	Rosmamuhamadani bin Ramli	Chairman	2016
84.	Muhammed Lamin Sanyang	Member	2016
85.	Tezara Cionita	Member	2013
86.	Amel Basher Ahmed Basher	Chairman	2013
87.	Golnar Kiani	Member	2013
88.	Suriani binti Mat Jusoh	Member	2012

#### INTERNAL EXAMINER (MASTER)

No.	Name	Category	Status/Graduated Year
1.	Nur Diyana binti Ahmad Fazil	Member	Thesis Submitted
2.	Muhammad Harussani bin Moklis	Member	2022
3.	Rabby Md Insiat Islam	Chairman	2022
4.	Seri Nur Zumaimi binti Ahmad Nadzri	Chairman	2021
5.	Rozilah binti Abdullah	Member	2021
6.	Qamariah Norhidayah binti Salleh	Member	2021
7.	Faris Syahiran bin Ismail	Member	2020

8.	Izyan Khairani binti Mohd Ismail	Chairman	2019
9.	Ahmad Safwan bin Ismail	Member	2019
10.	Siti Nurul Adura binti Daud	Chairman	2018
11.	Farid bin Bajuri	Member	2018
12.	Nurhanisah binti Mohd Hawari	Chairman	2017
13.	Sadeq Rashid Nfawa	Chairman	2017
14.	Mohd Fadhil bin Ahmad	Member	2016
15.	Abu Hatim bin Ibrahim	Member	2013
16.	Altayyeb Abdullah	Member	2013
17.	Lukmanul Hakim Zaini	Member	2013
18.	Aisyah Humaira binti Alias	Member	2013
19.	Mohd Shukri bin Ibrahim	Member	2012
20.	Wan Mohamad Haniffah bin Wan Hussin	Member	2012
21.	Khairul Azhar bin Mohammad	Member	2012
22.	Sairizal bin Misri	Member	2011
23.	Siti Hasnah binti Kamarudin	Member	2011
24.	Nurul Akmil binti Mustaffa	Chairman	2011
25.	Suraya binti Sulaiman	Chairman	2011
26.	Norani binti Abd Karim	Member	2011
27.	Sahari bin Japar	Member	2011

#### EXTERNAL EXAMINER (PHD)

No.	Name	Thesis Title	Year
1.	Lubna Gulnar, <b>University of Karachi, Pakistan</b>	Preparation and Characterization of Polymer Blended Films	2023
2.	B.Balamugundan <b>Sathyabama Institute of Science &amp; Technology, India</b>	Characterization of Selected Polymer Nanocomposites Using Friction Stir Processing	2021
3.	Nor Fadilah Shamsudin <b>Universiti Kuala Lumpur</b>	Investigation on Electrical Behavior of Damaged Composite Avionics Panel	2022
3.	Noordiana Mohd Ishak <b>Universiti Teknikal Malaysia Melaka</b>	Concurrent Engineering Approach in the Development of Natural Fiber Metal Laminate as Car Front Hood	2019
4.	Dulina Tholibon <b>Universiti Kebangsaan Malaysia</b>	Proses Penekanan Panas Komposit PP Diperkuat Gentian Kenaf Searah	2018
5.	Liew Fui Kiew <b>Universiti Malaysia Sarawak</b>	Physico-Mechanical Properties of Chemical Treated Jute-Bamboo Fiber Hybrid Composites	2017
6.	Iswandi <b>Universiti Kebangsaan Malaysia</b>	Kesan Penggabungan Saiz Partikel Pengisi dan Proses Pengacuan ke Atas Sifat Polimer	2016

#### EXTERNAL EXAMINER (MASTER)

No.	Name	Thesis Title	Year
1.	Nisa Naima Khalid <b>Universiti Kebangsaan Malaysia</b>	-Pembuatan Aditif Poliamida Diperkuat Gentian Karbon Bagi Aplikasi Polimer Komposit	2023
2.	Zatil Hafila Kamarudin <b>Universiti Teknikal Malaysia Melaka</b>	Fabrication and Characterisation of <i>Cymbopogan Citratus</i> Fibre Reinforced Thermoplastic Cassava Starch/Palm Wax Composite	2022
3.	Abdulrahman Abdulaziz Bakri Alhaj Mohammed <b>Universiti Tenaga Nasional</b>	Preparation and Characterization of Wheat Starch Based Biocomposite Film Reinforced with Sugar Palm Fiber.	2022
4.	Nur Diyana binti Zakuan <b>Universiti Teknikal Malaysia Melaka</b>	Development and Characterization of Thermoplastic Cassava Starch/Beeswax Reinforced Pandanus Amaryllifolius Composite	2022
5.	Nurul Haziatul Ain Norhasnan <b>Universiti Teknologi Malaysia</b>	Physio-Mechanical and Thermal Properties of Rice Husk and Cocopeat Reinforced Acrylonitrile	2021

		Butadiene Styrene Hybrid Biocomposites	
6.	Nurul-Anira Shahidah Binti Mohamad Razali <b>Universiti Teknikal Malaysia Melaka</b>	Mechanical Performance and Biodegradability of Unidirectional Pineapple Leaf Fibre Reinforced Polylactic Acid Composites	2021
7.	Jong Oi Ka <b>Universiti Tun Hussein Onn</b>	Determination of Tensile Properties and Moisture Effect of Areca Leaf Sheath Subjected to Flattening Process	2021
8.	Norizzati Zulkafli <b>Universiti Teknikal Malaysia Melaka</b>	Physico-Mechanical Properties of Hybrid Cross Ply Banana/Glass Fibre Reinforced PP Composites	2019
9.	Siti Nur Rabiatal Adawiyah <b>Universiti Teknikal Malaysia Melaka</b>	Characterization of Pineapple Leaf Fiber Reinforced PLA Composites	2018
10.	Mohd Yusuf Zakaria <b>Universiti Kebangsaan Malaysia</b>	Kesan Pengisi Gentian Karbon Terhadap Sifat Keberaliran Elektrik Dan Sifat Mekanik Komposit Epoksi	2015
11.	Mohd Najib Hamsan <b>Universiti Tenaga Nasional</b>	Epoxy Graphite/Carbon Fibre Composites	2013
12.	Lingenthiran A/L Samylingam <b>Universiti Malaysia Pahang</b>	Hybrid Fibre Composite for Knee Pad Development	2013
13.	Syazili Roslan <b>Universiti Malaysia Terengganu</b>	Rapid Detection Technique for Determination of Alkaloid Level in Dioscorea Hispida	2013

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#### **UNDERGRADUATE**

<b>No.</b>	<b>Name</b>	<b>Thesis Title</b>	<b>Graduated Year</b>
1.	Muhammad Irdin Bin Mohd Nazri	-Mechanical And Optical Properties Of Unbleached And Bleached Zinc Oxide Efb Paper	2023
2.	Muhammad Azri Bin Mohd Azib	-Thermal And Physical Properties Of Bleached And Unbleached Zinc Oxide Efb Paper	2023
3.	Aleif Hakimi Bin Ismail	Thermal Properties of Insulation Board Made from Durian Waste	2022
4.	Noorashikin Soh Binti Zulariffin Soh	Physical and Mechanical Properties of Low-Cost Insulation Board from Durian Skin Residues	2022
5.	Muhammad Safwan Bin Anuari	Design and Simulation of Inline Hydro Turbine for Green Energy Power Generation	2021
6.	Muhammad Aiman Hakimi Shamsuddin	Design of Water Bike for UPM Lake	2021
7.	Muhammad Hafiz Mohd Yunus	Tribological Behaviour of Rice Husk Reinforced Polymer Matrix Composite	2020
8.	Hazlan Husaing	Fatigue Analysis of Kevlar/Coconut Sheath Hybrid Composites	2020
9.	Pirman Chuari	Development of Side Table Kenaf Pultruded Composite Panel	2019
10.	Qamirul Rafizal Rashid	The Immersion Effect in Various Aqueous Solutions to the Hardness and Compressive Properties of Pultruded Kenaf Vinyl Ester Composite	2019
11.	Ahmad Syahir Hidrat	The Durability Assessment of Composite Structure in Difference Orientation of Kenaf Fibre Polymer Composites	2017
12.	Norain Hassim	Characterization of Recycled Cellulosic Fibre Using Mechanical De-Inking Process	2017
13.	Ahmad Farhan Shauki	The Effect of Heat Treatment in Mechanical and Morphology Properties of Kenaf Fibre Polymer Composites	2017
14.	Izzudin Syarif Tan	Study on Physicochemical Properties of Thermoplastic/ Kenaf Biocomposites with Incorporation of Hydrophobic and Hydrophilic Mineral Fillers	2016
15.	Zainul Arif Sumaidin	Mechanical Properties & Chemical Behaviours of Hybridized Kenaf/Chitosan Fiber Reinforced Polyethylene Biocomposites	2016

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16.	Leo Choe Shuang	Experimental of Creep/ Fatigue Life of 316L Stainless Steel at High Temperature	2013
17.	Sang Kok Yip	The effect of Melt Flow Index of Polypropylene on the Glass Transition Temperature of Kenaf /PP Composite	2013
18.	Loh Jack Chang	Particle Board from Kenaf Stem	2012
19.	Chai Chuan Wang	Kenaf Core Fibre Polymer Biocomposite Pallets for Injection Moulding Application	2012
20.	Lim Hui Yan	Properties of Oil Palm Empty Fruit Bunch (OPEFB) Fiber Polymer Composites	2012
21.	Mohd Harez B. Ibrahim	Mechanical & Physical Properties of Kenaf Fibre Reinforced Polymer Composite Exposed to Tropical Climate	2011
22.	Azzahir B. Razali	Lightweight Laminate Composites Made from Banana Pseudostem And Polypropylene Fibres	2011
23.	Mohd Hazwad Abdullah	Boards from Natural Fiber Waste	2010
24.	Mohd Fadzlee Jahari	Mechanical and Water Sorption Studies of Extruded Natural Fiber Polymer Composites	2010
25.	Choo Chien Ning	Effects of Coupling Agent on Tensile and Flexural Properties of Banana Fibre PVC Composites	2010
26.	Mohd Noor Yahya	Injection Molding Simulation Analysis of Natural Fiber Composites Product	2010
27.	Mohd Zolhilmi Noor	Impact Properties of Fiber Reinforced Polymer	2007
28.	Afzan Saiful Mazlan Bin Isa	Mechanical Properties of Banana Reinforced PVC Composites	2007
29.	Soo Wen Leong	Tensile and Flexural Properties of Banana Pseudo-stem Fiber Reinforced PVC Composites	2007
30.	Mohd Firdaus Adam	The Influence of Fibre Mass Fraction on Thermal Properties of Banana Pseudo-stem Fibre Reinforced PVC Composite Material	2007
31.	Muhd. Dhuha Idris	Mechanical Properties of Continuous Banana Fiber- Reinforced Polypropylene Composites	2005
32.	Mazli bin Kusin	Mechanical Properties of Short Coconut Fiber Reinforced Poly Propylene Composites	2005

## RESEARCH ACTIVITIES

### GRANT

14 grants as main researcher/project leader: **RM 663,100**  
 18 grants as main co-researcher: **RM 2,982,000**  
 Total accumulated funding: **RM 3,645,100**

No	Title	Role	Period (Year)	Sponsor /Grant & Amount (RM)	Status
1.	An Experimental Investigation on Banana Pseudo-Stem Reinforced PVC Composite	<b>Main Researcher</b>	2006-2007	Young Lecturer Grant Scheme/ UPM/10K	Completed
2.	Effect of Kenaf Nanofibers on Strength and Other Properties of Paper	<b>Main Researcher</b>	2010-2012	FRGS/KPT/42K	Completed
3.	Characterization and Development of Hybridized Composite Derived from Kenaf Fibers And Pineapple Leaf Fibre (PALF) Reinforced High Density Polyethylene	<b>Main Researcher</b>	2011-2013	RUGS/100K	Completed
4.	Optimum Formulation and Mechanical Properties of Kenaf Fiber Reinforced PVC Injection Moulded Composites	<b>Main Researcher</b>	2011-2013	RUGS/11K	Completed
5.	Compatibilization of Polyolefin/ Polysaccharides Biocomposites With Non-Ionic and Ionic	<b>Main</b>	2013-	ERGS/81K	Completed

	Surfactants	<b>Researcher</b>	2015		
6.	Experimental Determination of Fatigue/ Creep Life Of 316L Stainless Steel at High Temperature	<b>Main Researcher</b>	2012-2013	RUGS/15K	Completed
7.	Numerical Simulation and Experimental Studies on The Fatigue Limit and Fatigue Strength in High Temperature of Type 316L Stainless Steel	<b>Main Researcher</b>	2014-2015	Sciencefund/125K	Completed
8.	Green Nano-Zinc Oxide Superhydrophobic Bamboo Paper: The Biosynthesis, Characterization and Surface Interaction	<b>Main Researcher</b>	2015-2017	FRGS/73K	Completed
9.	Characterization of Fatigue Crack Propagation of Kenaf Fiber Reinforced Polyester Composite Under Constant Amplitude Loading	<b>Main Researcher</b>	2017-2019	GP IPS/20K	Completed
10.	Development & Characterization of Hybrid & Non-Hybrid Laminate Composites of Sugar Palm and Glass Fibre-Reinforced Polylactic Acid (PLA) For Motorcycles Parts	<b>Main Researcher</b>	2020-2022	GP IPB/95K	Completed
11.	Kenaf Fibre Reinforced Poly (Lactic) Acid Biocomposites- Characterization	<b>Main Researcher</b>	2020-2021	Steelcase Inc./17.6K	Completed
12.	Areca Nut Enrichment Project-Areca Nut Fiber For Biocomposites Product	<b>Main Researcher</b>	2021-2022	Sumber Bionano Tech/Inkind/2.5K	Completed
13.	Isolation & Characterization of Nanocrystalline Cellulose from Arrowroot (Maranta Arundinacea) Fibres For The Development of Nanocomposite Films	<b>Main Researcher</b>	2022-2024	Matching Grant UPM-Jordan 2022/25K	Ongoing
14.	Numerical and Experimental Investigation of Fibre Reinforced Injection-Moulded Thermoplastic Composites	Co-Researcher	2001-2002	UPM/10K	Completed
15.	Thermo-Mechanical Props. of Sugarcane Bagasse Reinforced UPVC Composites	Co-Researcher	2007-2009	RUGS/77K	Completed
16.	Fiber Reinforced Plastic Composites & Process Enhancement of Injection Molding	Co-Researcher	2007-2010	EPU/180K	Completed
17.	Increased Production Efficiency in Smallholder Kenaf Production Systems for Specific Industrial Application; <i>Laboratory trials of Decortication and Bioretting</i>	Co-Researcher	2009-2012	UNIDO/417K	Completed
18.	Increased Production Efficiency in Smallholder Kenaf Production Systems for Specific Industrial Application; <i>In-Field Mechanization</i>	Co-Researcher	2009-2012	UNIDO/435K	Completed
19.	Mechanical and Environmental Properties of Kenaf Fibre Reinforced Thermoplastic Polyurethane Composites	Co-Researcher	2010-2012	FRGS/KPT/43K	Completed
20.	Studies on Biodegradable Mulch Film Derived from Cocoa Pod Husk (CPH) Filled Poly (Lactic Acid) Biocomposites	Co-Researcher	2011-2013	RUGS/120K	Completed
21.	Glass and Sugar Palm Fibre Reinforced Polypropylene Hybrid Composite for Automotive Side Door Impact Beam	Co-Researcher	2016-2018	GP IPS/20K	Completed
22.	Repair of Damaged E-Glass Fiber Reinforced Pipe Joints Due to Pressure Impact by Using S-2 Glass Composites	Co-Researcher	2017-2019	GP IPS/20K	Completed
23.	Characterization and Development of Novel Biopolymer and Its Biocomposites Derived from Sugar Palm Tree	Co-Researcher	2013-2015	ERGS/96K	Completed
24.	Thermal Modification of Oil Palm (Elaeis Guineensis) And Bamboo ( <i>Gigantocloa Scortechinii</i> ) In Buffer Mediums and The Effect on Their Physical Mechanical and Durability Properties	Co-Researcher	2012-2013	RUGS/182K	Completed

25.	Development of Inexpensive Prosthetic-Leg Socket from Woven Kenaf-Glass Fibre Hybrid Composites	Co-Researcher	2013-2016	ERGS/125K	Completed
26.	Wave Absorption Characterization of Renewable Resource Green Materials as Bio-Substrates at RF & Microwave Freq.	Co-Researcher	2014-2016	FRGS/98K	Completed
27.	Conceptual Design, Material Selection, Development and Characterization of Natural Fiber Reinforced Biocomposites for Structural and Non-Structural Applications	Co-Researcher	2017-2019	HICOE/715K	Completed
28.	Effect of In-Situ Biosynthesis Condition on Zinc Oxide Nanoparticles Distribution in Pulp Slurry	Co-Researcher	2018-2020	GP IPS/25K	Completed
29.	Development of Oil Palm Empty Fruit Bunch/Sugarcane Bagasse Fibre Based Hybrid Composites Insulation Board for Construction Application	Co-Researcher	2018-2020	GP Putra Impak/150K	Completed
30.	Development and Characterization of Corn/Kenaf Fiber Reinforced Corn Starch Hybrid Composites	Co-Researcher	2019-2021	GP Putra Impak/99K	Completed
31.	Manufacturing of Full-Scale Prototype Anti Roll Bar Composites for A Commercial Sedan Car	Co-Researcher	2019-2021	PRGS/145K	Completed
32.	Development and Characterization of Woven Kenaf/Polyester Reinforced Polylactic Acid (PLA) Hybrid Composites	Co-Researcher	2021-2024	GP IPS/25K	Ongoing
33	Insulation board from oil palm fiber/waste	<b>Main Researcher</b>	2021-2024	Hicoe -76k	ongoing

#### **GRANT EVALUATOR**

No	Title/Activity	Grant	Year
1	A flexible magnetically conductive magnetorheological elastomer with different types of filler for assistive devices in rehabilitation.	FRGS	2022
2	Extraction of nanocellulose and development of green piezoelectric nanosensors from arrowroot fibres	FRGS	2022
3	The investigation of anti-microbial properties of natural tannin grafting with polyester and epoxy resins cross linking with tetraethoxysilane as biocomposite and coating materials	FRGS	2021
4	Development and characterization of hybrid and non-hybrid Laminate Composites of Sugar Palm and Glass Fibre-Reinforced Polylactic acid (PLA) for motorcycles parts	FRGS-MRSA	2018
5	Development of Rubber Buckling Restrained Bracing for Structures	FRGS	2019
6	Carbon Nanotubes as Reinforcement in SAC Lead Free Solders: Fundamental study on the solder joint integrity and intermetallic formation with laser soldering technique	FRGS	2019
7	Development of a multilayer component tailored using a sintering activator via powder metallurgy route.	FRGS	2019
8	Elucidation of porous geopolymer based seawater/zeolite: correlation between water transport and sorptivity with porosity	FRGS	2019
9	Effect of Sugar Palm Fibre Reinforced Polymer Composite as Sandwich Core Structure Under Quasi-Static Loading Condition.	FRGS	2019
10	Feasibility study and formulation of zero-cement based binder for alternative mortar materia	FRGS	2019
11	Investigation of the filament wounded sandwich structures as a substitute to the existing pultruded glass fibre reinforced polymer composite in the cross-arm structure of the high transmission towers	FRGS	2019
12	Improving crystallisation behaviour and mechanical properties of biodegradable polymers using nanofibrillated cellulose and nanobiochar as nucleating agent	FRGS	2019

13	Prototype development, fabrication and testing of design optimised crossarms of high-rise transmission towers.	PRGS	2019
14	Rubber Damper Device for Bridges	PRGS	2019
15	Fundamental Research Study of Hybrid Composites with Pinanga Malaiana Fibre (PMF) for Structural Applications\n\n\n	FRGS	2018
16	A fundamental study on green tribology using environmentally friendly composite material system	FRGS	2016
17	Effect of processing parameters on the preparation of nano-alpha-alumina from waste aluminium for biomedical applications	FRGS	2015
18	Study of Thermo-Mechanical Properties of Eggshell Bio-Filler (EBF) Reinforced Polylactic Acid (Pla) Composites	FRGS	2015
19	Fundamental investigation: Effect of silver nanoparticles (AgNPs) grafting on the properties of AgNPs-graft-cellulose nanomaterials	FRGS	2015
20	Panel, Bengkel Penilaian Prestasi Laporan Kemajuan /Akhir Penyelidikan	Putra	2021
21	Menilai Proposal	Putra	2018
22	Panel Penilai Bengkel Penilaian Prestasi Laporan Kemajuan/Akhir Penyelidikan	Putra	2019
23	Thermorheological behaviour of polyamide 11 blends and composites	Putra	2019
24	AJK, Penilaian Permohonan Skim Geran Penyelidikan Peringkat Universiti	Universiti	2013

#### **INTELLECTUAL PROPERTY (IP) – COPYRIGHT**

No	Names of researchers	Date	Signed by	Status
1.	M. Jawaid E.S. <b>Zainudin</b> , Thariq H.S.M, Naveen J.A Techno economic hard body armour Statutory Declaration under Copyright act 1987	16 <sup>th</sup> May 2019	Commissioner for Oaths No. W632 Shamugam Vassoo	Registered
2.	S.M. Sapuan, M.H. Abeid, E.S. <b>Zainudin</b> , Mohd Zuhri Mohamed Yusoff Development of a Photovoltaic Module with Fabricated and Evaluated Novel Backsheet Based Biocomposite Materials (7 elements) Statutory Declaration under Copyright act 1987	13 <sup>th</sup> Nov 2019	Commissioner for Oaths No. W634 YM Kolonel Dato' Seri Paduka Diraja Ramli bin Shuhaimi	Registered
3.	S.M. Sapuan, Noryani Muhammad, M.T. Mastura, E.S. <b>Zainudin</b> , and Mohd Zuhri Mohd Yusoff Statistical Framework of Material Selection using Error Analysis Statutory Declaration under Copyright act 1987	13 Nov 2019	Commissioner for Oaths No. W634 YM Kolonel Dato' Seri Paduka Diraja Ramli bin Shuhaimi	Registered
4.	S.M. Sapuan, E.S. <b>Zainudin</b> , M.R. Ishak and R.A. Ilyas Operation Manual for Fabrication of sugar palm nanocrystalline Cellulose (SPNCCs) reinforced sugar starch bionanocomposites Statutory Declaration under Copyright act 1987	27 <sup>th</sup> August 2019	Commissioner for Oaths No. B429 Risdianto bin Rasyidin	Registered

#### **AWARDS**

##### **AWARDS AND RECOGNITIONS**

No	Title	Organization	Award	Year
1.	Top Materials Science Scientists in Malaysia 2022	Research.com	Top <i>Materials Science</i> Scientists	2022
2.	World Top 2% Scientist (subject-wise) Citation Impact in Single Year 2019	Journal.pbio	World Top 2% Scientist	2019
3.	H Index and Citation – Associate Professor)	Faculty of Engineering, UPM	Top 3	2018
4.	Sijil Perkhidmatan Cemerlang	UPM	Certificate	2020

5.	Sijil Perkhidmatan Cemerlang	UPM	Certificate	2012
6.	Sijil Perkhidmatan Cemerlang	UPM	Certificate	2011
7.	Sijil Perkhidmatan Cemerlang	UPM	Certificate	2004
8.	Anugerah Perkhidmatan Cemerlang	UPM	Certificate	2019
9.	Anugerah Perkhidmatan Cemerlang	UPM	Certificate	2016
10.	Anugerah Perkhidmatan Cemerlang	UPM	Certificate	2015
11.	Anugerah Perkhidmatan Cemerlang	UPM	Certificate	2009
12.	Anugerah Kecemerlangan Dalam Pengajaran	Faculty Engineering	Certificate	2017
13.	Anugerah Kecemerlangan Dalam Pengajaran	Faculty Engineering	Certificate	2016
14.	Anugerah Kecemerlangan Dalam Pengajaran	Faculty Engineering	Certificate	2012
15.	Anugerah Kecemerlangan Dalam Pengajaran	Faculty Engineering	Certificate	2011
16.	Anugerah Kecemerlangan Dalam Pengajaran	Faculty Engineering	Certificate	2010
17.	Anugerah Kecemerlangan Dalam Pengajaran	Faculty Engineering	Certificate	2009

### **RESEARCH AWARDS**

<b>No</b>	<b>Title</b>	<b>Organization</b>	<b>Award</b>	<b>Year</b>
18.	Green In-situ Synthesis of Zinc Oxide for Potential Antimicrobial Bamboo Paper	Hyper Interdisciplinary Conference in Malaysia 2023	Silver Medal	2023
19.	Development and Characterization of Sugar Palm Nanocrystalline Cellulose Reinforced Sugar Palm Starch Bionanocomposites	Persatuan Saintis Muslim Malaysia	PERINTIS Publication Award	2022
20.	Degradation Behaviour of Arrowroot Fibre (Maranta Arundinacea) Reinforced Arrowroot Starch Biocomposite Films	International Conference on Env. Sci. & Green Technology (IC-EGT 2022)	Best Presenter	2022
21.	A Descriptive Study of Arrowroot (Maranta arundinacea) Based Biocomposites	Wood & Biofibre International Conference (WOBIC 2021)	Best Poster Presenter	2021
22.	Development of Thermally Polycrystalline Photovoltaic ModuleBased Novel Biocomposite Materials	21 <sup>st</sup> Malaysia Technology Expo	Gold Award	2020
23.	Materials Selection of Hybrid Bio-Composites Thermoset Matrix for Automotive Bumper Beam Application Using TOPSIS Method	International Conference on Plastics, Rubber and Composites	Best paper	2014
24.	Thermal Degradation Behaviour of Alkali Treated Betel Nut Husk Fibre Reinforced VE Composites	Postgraduate Symposium on Composites Science and Technology	Best Paper	2014
25.	Ionic Mixture-Compatibilized Biocomposites with Improved Mechanical Properties	Invention, Research and Innovation Exhibition (PRPI)	Silver Medal	2014
26.	Development of Woven Fabric Reinforcement from Betal Nut Husk Fiber: Physical Properties of BNH Fiber	UPM-UNIKL Symposium	Best Scientific Paper & Oral Presenter	2012
27.	Mechanical Properties of Pultruded Biocomposite	SAMPE Asia 2012 Conference and Exhibition	2 <sup>nd</sup> poster winner	2012
28.	Properties of Kenaf Fiber Reinforced Thermoplastic Polyurethane Composite	SAMPE Asia 2012 Conference and Exhibition	3 <sup>rd</sup> poster winner	2012
29.	Reduction of Water Uptake of Composite Through Hybridization	Invention, Research and Innovation Exhibition (PRPI)	Bronze Medal	2011
30.	Potential of Pineapple Leaves Fibres as A Substitute to Glass Fibre Hybridized	Invention, Research and Innovation Exhibition (PRPI)	Silver Medal	2011

Composites						
31.	High Moisture Durability of Moulded Biocomposite	Invention, Research and Innovation Exhibition (PRPI)	Silver Medal	2011		
32.	Green Composite Derived from Unplasticized Polyvinyl Chloride Green Material for Industrial Building System	Invention, Research and Innovation Exhibition (PRPI)	Bronze Medal	2011		
33.	Feasibility of Biocomposite Processing in Manufacturing Industries	Invention, Research and Innovation Exhibition (PRPI)	Silver Medal	2011		
34.	Green Material for Industrial Building System	Invention, Research and Innovation Exhibition (PRPI)	Bronze Medal	2011		
35.	Volumetric Handling Solution Device	Malaysia Technology Expo (MTE)	Silver Medal	2011		
36.	The Mechanical and Physical Properties of Hybrid Banana Pseudostem/Glass Fiber Reinforced Polyester Composites	8 <sup>th</sup> International Conference on Composite Science and Technology (ICCST8)	Best Poster	2011		
37.	Design and Fabrication of Chair from Banana Pseudo-stem Fibre Reinforced Polymer Composites	Invention, Research and Innovation Exhibition (PRPI)	Certificate	2009		
38.	Natural Fibre Composites: Properties, Design & Fabrication	Invention, Research and Innovation Exhibition (PRPI)	Bronze Medal	2005		

## PROFESSIONAL SERVICES AND CONSULTANCY ACTIVITIES

### CONSULTANCY ACTIVITIES

No	Project	Role	Organisation	Year
1.	Material, Properties, Products and Infield Mechanization of Kenaf And Its Composites	Project-manager/ Co-researcher	Kenaf Fiber Holdings Sdn Bhd	2009 - 2010
2.	R&D on Kenaf Mechanization	Focus Group Researcher	UPM/LKTN	2010 - 2011
3.	Biocomposite and Green Product	Secretariat	MyKenaf Sdn Bhd	2011

### REVIEWER

No	Research Title	Journal/Book/Proceeding	Year
1.	Feasibility of Sugarcane Straw for The Development of Sustainable Biopolymer-based Composites	Industrial Crops & Products	2021
2.	Properties of Particleboard Made of De-Ashed Oil Palm EFB Particle with Melamine Urea Formaldehyde Resin	Pertanika Journal of Science and Technology	2021
3.	Utilisation of Oil Palm Fibres Biomass Waste as Additives in Foamed Concrete	Pertanika Journal of Science and Technology	2021
4.	Effect of Water Absorption on Flexural Properties of Kenaf/Glass Fibres Reinforced Unsaturated Polyester Hybrid Composites for Electrical Insulator Applications	Pertanika Journal of Science and Technology	2021
5.	Physical and Thermal Properties of Roofing Materials from Oil Palm EFB for Use as a Building Material	Advances in Materials Science & Engineering	2021
6.	Mechanical and Hygrothermal Properties of Novel Sustainable Bio-based Concrete Performed with Mixtures of Rice Straw/Husk	Construction and Building Materials	2021
7.	Potential of Ramie Fibres for Low Threat Body Armours	Composites Science and Technology	2020
8.	Biocomposites from Renewable Sources: A Novel Approach to Design Sustainable Structural Materials with Specific Key Feature and End-Use Characteristics	Journal of Materials Research and Technology	2020
9.	Mechanical Property Studies on Flax Fiber Reinforced Basalt	Current Materials Science	2020

	Powder Filled Polyester Composite		
10.	Tensile and Thermal Properties of Kenaf Cellulose-Reinforced Polypropylene Composites	Journal of Thermoplastic Composites Materials	2019
11.	Development and Characterization of Polyvinyl Alcohol Reinforced with Date Palm Midrib Powder	Journal of Thermoplastic Composite Materials	2019
12.	Mechanical, Thermal & Structural Characterization of Binderless Lignocellulosic Biopolymers Prepared from Raw Micro-fibrillated Phoenix Dactylifera	Polymer Testing	2019
13.	New Cellulosic Fibre Characterization from <i>Phoenix pusilla</i> for Composite Reinforcement Applications	Journal of Materials Research & Technology	2019
14.	Peridynamic Method and Finite Element Method Comparison for Tensile Elongation and Fracture Simulations of PMMA	Int. Conf. on Advances in Mechanical & Manufacturing Eng. (ICAM2E)	2019
15.	Vibration Transmitted to the Hand when Drilling Composite Material	Int. Conf. on Advances in Mechanical & Manufacturing Eng. (ICAM2E)	2019
16.	Effect of Fibre Orientation & Reinforcements on Performance of Composite Pressure Vessel	5 <sup>th</sup> Int. Conf. on Computational Methods in Eng & Health Sc. (ICCMHEH)	2019
17.	Characteristic Study of Chopped Strand Mat/Woven Roving Behaviour on Bending Condition Experimental	Jurnal Teknologi	2013
18.	Simulation of Low Velocity Impact on Composite Hemispherical Shell	International Conference on Advances in Mechanical and Manufacturing Engineering (ICAM2E 2013)	2013
19.	Digital Logic and Knowledge Based System for the Automotive Piston Material Selection	International Journal of Materials and Structural Integrity (IJMSI)	2012
20.	Water Retention in Kenaf/Polypropylene Composites Due to Repeated Immersion and Drying Conditions	8 <sup>th</sup> International Conference on Composite Science and Technology (ICCST8)	2011
21.	Study on abaca fibre reinforced high impact polystyrene (HIPS) composites by TGA analysis	International Journal of the Physical Sciences	2010
22.	Effect of Moisture on Green Compression Strength for Tailing Sands from Ex-Tin Mines in Perak State for Making Green Sand-Casting Mould	Pertanika Journal of Science and Technology	2010
23.	Mechano-Microbial Retting of Jute - the Future Ahead	International Conf. on Kenaf & Allied Fibres (ICKAF)	2010
24.	Design and Fabrication of a Student Competition Based Racing Car	Scientific Research and Essays	2009
25.	Application of Analytical Hierarchy Process in The Design Concept Selection of Automotive Composite Bumper Beam During the Conceptual Design Stage	Scientific Research and Essays	2009
26.	Water Absorption & Tensile Properties of Soil Buried Kenaf Fibre Reinforced Unsaturated PE Composites	Journal of Food, Agriculture & Environment	2009
27.	TGA of MAH and Impact Modifies in Abaca Fibre Reinforced HIPS Composites	Journal of Food, Agriculture & Environment	2009
28.	Analysis of The Chemical Composition and Morphological Structure of Banana Pseudo-Stem	BioResources	2009
29.	Chemical, Morphological & Mechanical Analysis of Sisal Fiber Reinforced Post-Consumer PE Composites	eXPRESS Polymer Letters	2009
30.	Shear Capacity of Dowelled Mortise and Tenon in Tropical Timber	Conference on Advanced Material & Nanotechnology (CAMAN)	2009

31.	Micromechanical and Internal Discontinuity Aspects in Fusion Welded Joints	Conference on Advanced Material & Nanotechnology (CAMAN)	2009
32.	Probabilistic Assessments of The Plate Using Monte Carlo Simulation	Asia Pacific Conference on Defence & Security Technology (DSTC)	2009
33.	Detection in A Composite Structure Using Artificial Neural Network	Composite Materials Technology	2009
34.	Oil Palm Empty Fruit Bunch Fibre-Filled Poly (Vinyl Chloride) Composites: Natural Fibre Reinforced Composites	Research on Natural Fibre Reinforced Polymer Composite	2009
35.	A Review of The Natural Fiber Reinforced Polymer (FRP) Composite	Research on Natural Fibre Reinforced Polymer Composite	2009
36.	Bio Wastes - Hybrid Composites: The Properties of Coir/Glass Hybrid Reinforced Polyester Composites	Research on Natural Fibre Reinforced Polymer Composite	2009
37.	Polymer Composites	9 <sup>th</sup> National Symposium on Polymeric Materials	2009
38.	Design of Automatic Scrambled Egg Cooker	Journal of Industrial Technology	2008
39.	Composite Product Development: Case Study in Automotive Bumper Fascia	Journal of Industrial Technology	2005
40.	Modelling of Intake Valve Angle and Study of Turbulence Kinetic Energy and Dissipation Rate	Journal of Industrial Technology	2003

#### **ACADEMIC PROMOTION ASSESSOR (NATIONAL LEVEL)**

No	Position	Detail	Year
1.	External Assessor	Promotion to Associate Professor, Dr. Mohamed Abdul Rahman Universiti Islam Antarabangsa Malaysia (UIAM)	2015
2.	External Assessor	Promotion to Associate Professor Dr. Maizatunisa Othman Universiti Islam Antarabangsa Malaysia (UIAM)	2017

#### **JARINGAN INDUSTRI DAN KOMUNITI**

No	Position	Detail	Year
1.	Leader	Professional training to industry and continuous cooperation with Innovative Pultrusion Sdn Bhd (IPSB)	2017 – 2018
2.	Leader	Donations of SprutCAM software by an external company worth RM27000.	2016
3.	Leader	Community service in the development of the Orang Asli community in Johor.	2011-2012
4.	Leader	Areca Nut Enrichment Project.	2021
5.	Leader	Industrial research grant (RM11,000) from Mechasolve Engineering.	2021-2022
6.	Academia/Co-leader	Project with Steelcase Asia Sdn. Bhd	2020
7.	Academia/Co-leader	Hari Terbuka Enau	2019
8.	Academia/Co-leader	Seminar Enau Kebangsaan 2019	2019
9.	Academia/Co-leader	Commercialising Rubber-Carbon Nanotube Nanocomposite as Shoe Sole	2019
10.	Penasihat	Projek Kertas Kitar Semula Bersama pelajar Sekolah Seri Puteri, Cyberjaya	2019

11.	Penasihat	Projek Penggunaan Kertas Kitar Semuka bersama pelajar Sekolah Menengah Sri Al-Amin, Bangi	2019
12.	Academia/ Co-leader	Global I lead STEM Camp between UPM, PTA SBPI Selandar, Asasi Pertanian & Faculty of Science, UPM.	2017
13.	Academia/ Co-leader	Collaborative meetings and consultation with NGC Energy Sdn Bhd,	2017
14.	Academia/ Co-leader	Non-disclosure agreement between UPM and Universiti Malaysia Pahang (UMP) for composite and advanced materials projects	2017
15.	Academia/ Co-leader	Pameran Penyelidikan & Jaringan Bersama Industri	2016

### INTERNATIONAL INVOLVEMENTS

1. As reviewer for a few International CIJ and non-CIJ journals.
2. As a committee member for a few international conferences.
3. As an invited speaker and chair session for a few international conferences.
4. As co-researcher for UNIDO (RM852K) grant offered to INTROP, UPM for kenaf research activities.
5. As co-editor for a book published by Elsevier entitled "Natural Fibre Reinforced Vinyl Ester and Vinyl Polymer Composites", in 2018.
6. As Postdoctoral fellow & visiting Lecturer at Faculty of Engineering, Brunel University, UK, 2013-2014.
7. Kenaf Fibre Reinforced Poly (Lactic) Acid Biocomposites- Characterization-5 months research project with Steelcase Asia Pacific.
8. As external examiner for a PhD thesis from Sathyabama Institute of Science and Technology, India.
9. Co-Director of International Conference on Sugar Palm and Allied Fibre Polymer Composites (SAPC) 2021.
10. Invitation of Commencement for Fellow of the International Association of Advanced Materials, FIAAM (Sweden), June 2020
11. Member - The International Scientific Society of Food, Agriculture and Environment (ISFAE)
12. Member - Society for the Advancement of Material and Process Engineering (SAMPE)
13. Resource person for International Seminar on Strengthening of Collaboration for Jute, Kenaf & Allied Fibres Research & Development.

### PUBLICATIONS

#### SCOPUS

H-INDEX = 55, CITATION= 9516

#### GOOGLE SCHOLAR

H-INDEX= 65, i10-index= 173, CITATION= 13100

#### CITATION INDEX JOURNALS

1. SFK Sherwani, SM Sapuan, ES **Zainudin**, Z Leman, A Khalina, J Tarique, 2024. Analysing the Evolution of Sugar Palm Fiber (*Arenga pinnata* Wurmb. Merr) Polymer Hybrid Composites: A Review; Emerging Sustainable and Renewable Composites, 1-32
2. ES **Zainudin**, HA Aisyah, NM Nurazzi, RA Ilyas, 2024. Biocomposites from Durian Biomass Wastes: Properties, Characterisation, and Applications; Emerging Sustainable and Renewable Composites, 206-224,
3. MA Azka, SM Sapuan, H Abral, ES **Zainudin**, FA Aziz, 2024. An examination of recent research of water absorption behavior of natural fiber reinforced polylactic acid (PLA) composites: A review; International Journal of Biological Macromolecules, 131845, (1)

4. I Aliyu, SM Sapuan, ES **Zainudin**, MZ Mohamed Yusoff, R Yahaya, 2024. An overview of mechanical and corrosion properties of aluminium matrix composites reinforced with plant based natural fibres; *Physical Sciences Reviews* 9 (1), 357-386

5. S Budati, MH Sulaiman, Z Leman, MZM Yusoff, ES **Zainudin**, 2024. Experimental investigation on the physical, mechanical, and tribological behavior of brake friction composites for railway application *Jurnal Tribologi* 40, 212-225

## 2023

1. **Zainudin** E.S., Aisyah H.A. and Shamsudin R, 2023. Characterisation of Durian Skin Biocomposite Insulator Board, *Pertanika Journal of Science & Technology*, accepted.
2. E.S **Zainudin**, Shada Khalid, 2023. TOTAL QUALITY MANAGEMENT PRACTICES AND COMPETITIVE ADVANTAGE IN YEMEN AIRWAYS, 24th INTERNATIONAL CONFERENCE ON ADVANCES IN MATERIALS & PROCESSING TECHNOLOGIES (AMPT 2023) proceedings, accepted.
3. Aliyu, I., Sapuan, S.M., **Zainudin**, E.S., Zuhri, M.Y.M., Ridwan, Y., 2023. Hardness and corrosion behaviour of stir cast LM26 Al/sugar palm fibre ash composites (2023), *Multidiscipline Modeling in Materials and Structures*, 19(4), pp. 748-765
4. Hazrol, M.D., Sapuan, S.M., Ilyas, R.A, **Zainudin**, E.S (...), Zuhri, M.Y.M., Abdul, N.I., 2023. Effect of corn husk fibre loading on thermal and biodegradable properties of kenaf/cornhusk fibre reinforced corn starch-based hybrid composites, *Open Access, Heliyon*, 9(4),e15153
5. Aliyu, I., Sapuan, S.M., **Zainudin**, E.S., (...), Yahaya, R., Jaafar, C.N.A.(2023). An overview of mechanical and corrosion properties of aluminium matrix composites reinforced with plant based natural fibres ( Book Chapter). *Biopolymer Composites: Production and Modification from Tropical Wood and Non-Wood Raw Materials*, pp. 131-160,
6. Nanofillers: from laboratory to industry ( Book Chapter) Aisyah, H.A., Padzil, F.N.M., Juliana, A.H., **Zainudin**, E.S. 2023. *Synthetic and Natural Nanofillers in Polymer Composites: Properties and Applications*, pp. 417-425
7. Aliyu, I., Sapuan, S. M., **Zainudin**, E. S., Rashid, U., Zuhri, M. Y. M., & Yahaya, R. (2023). Characterization of Ash from Sugar Palm [*Arenga Pinnata (Wrumb) Merr.*] Fiber for Industrial Application. *Journal of Natural Fibers*, 20(1), 2170943.
8. Tarique, J., Sapuan, S. M., **Zainudin**, E. S., Khalina, A., Ilyas, R. A., Hazrati, K. Z., & Aliyu, I. (2023). A comparative review of the effects of different fibre concentrations on arrowroot fibre and other fibre-reinforced composite films. *Materials Today: Proceedings*. 74(3), pp. 411-414.

## 2022

9. Sherwani, S. F. K., Salit, M. S. B., **Zainudin**, E. S. B., Leman, Z., & Khalina, A. (2022). Physical and flammability properties of treated sugar palm fibre reinforced polylactic acid composites. *Journal of Industrial Textiles*, 52, 15280837221133574.
10. Norizan, M. N., Shazleen, S. S., Alias, A. H., Sabaruddin, F. A., Asyraf, M. R. M., **Zainudin**, E. S., Abdullah, N., Samsudin, M.S., Kamarudin, S.H. & Norrahim, M. N. F. (2022). Nanocellulose-Based Nanocomposites for Sustainable Applications: A Review. *Nanomaterials*, 12(19), 3483.
11. Nor, M.A.M., Sapuan, S.M., Yusoff, M.Z.M. and **Zainudin**, E.S., 2022. Mechanical, Thermal and Morphological Properties of Woven Kenaf Fiber Reinforced Polylactic Acid (PLA) Composites. *Fibers and Polymers*, pp.1-10.
12. Ramlee, N.A., Jawaid, M., **Zainudin**, E.S., Yamani, S.A.K., Alamery, S., Fouad, H., Santulli, C. and Sarmin, S.N., 2022. Thermal and acoustic properties of silane and hydrogen peroxide treated oil palm/bagasse fiber based biophenolic hybrid composites. *Polymer Composites*.
13. Tarique, J., Sapuan, S.M., Khalina, A., Ilyas, R.A. and **Zainudin**, E.S., 2022. Thermal, flammability, and antimicrobial properties of arrowroot (*Maranta arundinacea*) fiber reinforced arrowroot starch biopolymer composites for food packaging applications. *International Journal of Biological Macromolecules*. 213, p1-10
14. Azlin, M.N.M., Sapuan, S.M., Zuhri, M.Y.M., **Zainudin**, E.S. and Ilyas, R.A., 2022. Thermal Stability, Dynamic Mechanical Analysis and Flammability Properties of Woven Kenaf/Polyester-Reinforced Polylactic Acid Hybrid Laminated Composites. *Polymers*, 14(13), p.2690.
15. Hazrol, M.D., Sapuan, S.M., **Zainudin**, E.S., Wahab, N.I.A. and Ilyas, R.A., 2022. Effect of Kenaf Fibre as Reinforcing Fillers in Corn Starch-Based Biocomposite Film. *Polymers*, 14(8), p.1590.
16. Ilyas, R.A., Aisyah, H.A., Nordin, A.H., Ngadi, N., Zuhri, M.Y.M., Asyraf, M.R.M., Sapuan, S.M., **Zainudin**, E.S., Sharma, S., Abrial, H. and Asrofi, M., 2022. Natural-Fiber-Reinforced Chitosan, Chitosan Blends and Their Nanocomposites for Various Advanced Applications. *Polymers*, 14(5), p.874.

17. Tarique, J., **Zainudin, E.S.**, Sapuan, S.M., Ilyas, R.A. and Khalina, A., 2022. Physical, Mechanical, and Morphological Performances of Arrowroot (*Maranta arundinacea*) Fiber Reinforced Arrowroot Starch Biopolymer Composites. *Polymers*, 14(3), p.388.
18. Sherwani, S.F.K., Sapuan, S.M., Leman, Z., **Zainudin, E.S.** and Khalina, A., 2022. Effect of alkaline and benzoyl chloride treatments on the mechanical and morphological properties of sugar palm fiber-reinforced poly (lactic acid) composites. *Textile Research Journal*, 92(3-4), pp.593-607.
19. Ilyas, R.A., Zuhri, M.Y.M., Aisyah, H.A., Asyraf, M.R.M., Hassan, S.A., **Zainudin, E.S.**, Sapuan, S.M., Sharma, S., Bangar, S.P., Jumaidin, R. and Nawab, Y., 2022. Natural Fiber-Reinforced Polylactic Acid, Polylactic Acid Blends and Their Composites for Advanced Applications. *Polymers*, 14(1), p.202.
20. Azlin, M.N.M., Sapuan, S.M., Zuhri, M.Y.M. and **Zainudin, E.S.**, 2022. Effect of stacking sequence and fiber content on mechanical and morphological properties of woven kenaf/polyester fiber reinforced polylactic acid (PLA) hybrid laminated composites. *Journal of Materials Research and Technology*, 16, pp.1190-1201.
21. Azlin, M.N.M., Sapuan, S.M., Zuhri, M.Y.M. and **Zainudin, E.S.**, 2022. Mechanical, morphological and thermal properties of woven polyester fiber reinforced polylactic acid (PLA) composites. *Fibers and Polymers*, 23(1), pp.234-242.

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22. Nurazzi, N.M., Asyraf, M.R.M., Fatimah Athiyah, S., Shazleen, S.S., Rafiqah, S., Harussani, M.M., Kamarudin, S.H., Razman, M.R., Rahmah, M., **Zainudin, E.S.** and Ilyas, R.A., 2021. A review on mechanical performance of hybrid natural fiber polymer composites for structural applications. *Polymers*, 13(13), p.2170.
23. Nurazzi, N.M., Asyraf, M.R.M., Rayung, M., Norrahim, M.N.F., Shazleen, S.S., Rani, M.S.A., Shafi, A.R., Aisyah, H.A., Radzi, M.H.M., Sabaruddin, F.A., Ilyas, R.A., **Zainudin, E.S.**, and Abdan, K., 2021. Thermogravimetric Analysis Properties of Cellulosic Natural Fiber Polymer Composites: A Review on Influence of Chemical Treatments. *Polymers*, 13(16), p.2710.
24. Hazrol, M.D., Sapuan, S.M., **Zainudin, E.S.**, Zuhri, M.Y.M. and Abdul Wahab, N.I., 2021. Corn starch (*Zea mays*) biopolymer plastic reaction in combination with sorbitol and glycerol. *Polymers*, 13(2), p. 242.
25. Nurazzi, N.M., Sabaruddin, F.A., Harussani, M.M., Kamarudin, S.H., Rayung, M., Asyraf, M.R.M., Aisyah, H.A., Norrahim, M.N.F., Ilyas, R.A., Abdullah, N. and **Zainudin, E.S.**, 2021. Mechanical Performance and Applications of CNTs Reinforced Polymer Composites—A Review. *Nanomaterials*, 11(9), p.2186.
26. Supian, A.B.M., Sapuan, S.M., Zuhri, M.Y.M., **Zainudin, E.S.**, Ya, H.H. and Hisham, H.N., 2021. Effect of winding orientation on energy absorption and failure modes of filament wound kenaf/glass fibre reinforced epoxy hybrid composite tubes under intermediate-velocity impact (IVI) load. *Journal of Materials Research and Technology*, 10, pp.1-14.
27. Ramlee, N.A., Jawaid, M., Yamani, S.A.K., **Zainudin, E.S.** and Alamery, S., 2021. Effect of surface treatment on mechanical, physical and morphological properties of oil palm/bagasse fiber reinforced phenolic hybrid composites for wall thermal insulation application. *Construction and Building Materials*, 276, p.122239.
28. Sherwani, S.F.K., Sapuan, S.M., Leman, Z., **Zainudin, E.S.** and Khalina, A., 2021. Physical, mechanical and morphological properties of sugar palm fiber reinforced polylactic acid composites. *Fibers and Polymers*, 22(11), pp.3095-3105.
29. Ramlee, N.A., Jawaid, M., Ismail, A.S., **Zainudin, E.S.** and Yamani, S.A.K., 2021. Evaluation of thermal and acoustic properties of oil palm empty fruit bunch/sugarcane bagasse fibres based hybrid composites for wall buildings thermal insulation. *Fibers and Polymers*, 22(9), pp.2563-2571.
30. Sherwani, S.F.K., **Zainudin, E.S.**, Sapuan, S.M., Leman, Z. and Abdan, K., 2021. Mechanical properties of sugar palm (*Arenga pinnata* Wurmb. Merr)/glass fiber-reinforced poly (lactic acid) hybrid composites for potential use in motorcycle components. *Polymers*, 13(18), p.3061.
31. Bobba, S., Leman, Z., **Zainuddin, E.S.** and Sapuan, S.M., 2021. Impact and internal pressure failure of E-glass and S-glass epoxy composite elbow pipe joints influenced by sea water. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, 235(1), pp.116-123.
32. Sherwani, S.F.K., **Zainudin, E.S.**, Sapuan, S.M., Leman, Z. and Khalina, A., 2021. Physical, Mechanical, and Morphological Properties of Treated Sugar Palm/Glass Reinforced Poly (Lactic Acid) Hybrid Composites. *Polymers*, 13(21), p.3620.
33. Sobri, Z., Asa'ari, A.Z.M., Yacob, N., San H'ng, P., Abdullah, L.C. and **Zainudin, E.S.**, 2021. In situ Formation of Zinc Oxide on Bamboo Bleached Pulp in Preparation of Antibacterial Paper: Effect of Precursors Addition. *BioResources*, 16(3).
34. Mohamed, S.N., **Zainudin, E.S.**, Sapuan, S.M., Deros, M.M. and Arifin, A.T., 2021. Crack growth analysis for rice husk reinforced polypropylene composite using equivalent initial flaw size concept. *BioResources*, 16(3), p.4963.

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35. Ilyas, R.A., Sapuan, S.M., Atiqah, A., Ibrahim, R., Abral, H., Ishak, M.R., **Zainudin, E.S.**, Nurazzi, N.M., Atikah, M.S.N., Ansari, M.N.M. and Asyraf, M.R.M., 2020. Sugar palm (*Arenga pinnata* [Wurmb.] Merr) starch films containing sugar palm nanofibrillated cellulose as reinforcement: Water barrier properties. *Polymer Composites*, 41(2), pp.459-467.
36. Ibrahim, M.I.J., Sapuan, S.M., **Zainudin, E.S.** and Zuhri, M.Y.M., 2020. Preparation and characterization of cornhusk/sugar palm fiber reinforced Cornstarch-based hybrid composites. *Journal of Materials Research and Technology*, 9(1), pp.200-211.
37. Mukhtar, I., Leman, Z., **Zainudin, E.S.** and Ishak, M.R., 2020. Effectiveness of alkali and sodium bicarbonate treatments on sugar palm fiber: mechanical, thermal, and chemical investigations. *Journal of Natural Fibers*. 17(6), pp. 877-889.
38. Bakar, M.S.A., Salit, M.S., Yusoff, M.Z.M., **Zainudin, E.S.** and Ya, H.H., 2020. The crashworthiness performance of stacking sequence on filament wound hybrid composite energy absorption tube subjected to quasi-static compression load. *Journal of Materials Research and Technology*, 9(1), pp.654-666.
39. Mohamed, S.A.N., **Zainudin, E.S.**, Sapuan, S.M., Azaman, M.D. and Arifin, A.M.T., 2020. Energy behavior assessment of rice husk fibres reinforced polymer composite. *Journal of Materials Research and Technology*, 9(1), pp.383-393.
40. Supian, A.B.M., Sapuan, S.M., Zuhri, M.Y.M., **Zainudin, E.S.** and Ya, H.H., 2020. Crashworthiness performance of hybrid kenaf/glass fiber reinforced epoxy tube on winding orientation effect under quasi-static compression load. *Defence Technology*, 16(5), pp.1051-1061.
41. Noryani, M., Sapuan, S.M., Mastura, M.T., Zuhri, M.Y.M. and **Zainudin, E.S.**, 2020. Statistical inferences in material selection of a polymer matrix for natural fiber composites. *Polimery*, 65(2), pp.105-114.
42. Bobba, S., Leman, Z., **Zainudin, E.S.** and Sapuan, S.M., 2020. Low Velocity Impact and Internal Pressure Behaviors of Unaged E-Glass and S-Glass/Epoxy Composite Elbow Pipe Joints. *Journal of Pipeline Systems Engineering and Practice*, 11(4), p.04020043.
43. Mohamed, S.A.N., **Zainudin, E.S.**, Sapuan, S.M., Azaman, M.D. and Arifin, A.M.T., 2020. Effects of Different Stress Ratios on Fatigue Crack Growth of Rice Husk Fibre-reinforced Composite. *BioResources*, 15(3), pp.6192-6205.
44. Bobba, S., Leman, Z., **Zainudin, E.S.** and Sapuan, S.M., 2020, October. Characterisation of the tensile and fracture properties of filament wound natural fibre rings. In *AIP Conference Proceedings* (Vol. 2284, No. 1, p. 020015). AIP Publishing LLC.
45. Ilyas, R.A., Sapuan, S.M., Ibrahim, R., Abral, H., Ishak, M.R., **Zainudin, E.S.**, Atiqah, A., Atikah, M.S.N., Syafri, E., Asrofi, M. and Jumaidin, R., 2020. Thermal, biodegradability and water barrier properties of bio-nanocomposites based on plasticised sugar palm starch and nanofibrillated celluloses from sugar palm fibres. *Journal of Biobased Materials and Bioenergy*, 14(2), pp.234-248.

## 2019

46. Ilyas, R.A., Sapuan, S.M., Ishak, M.R. and **Zainudin, E.S.**, 2019. Sugar palm nanofibrillated cellulose (*Arenga pinnata* (Wurmb.) Merr): Effect of cycles on their yield, physic-chemical, morphological and thermal behavior. *International Journal of Biological Macromolecules*, 123, pp.379-388.
47. Ilyas, R.A., Sapuan, S.M., Ibrahim, R., Abral, H., Ishak, M.R., **Zainudin, E.S.**, Asrofi, M., Atikah, M.S.N., Huzaifah, M.R.M., Radzi, A.M. and Azammi, A.M.N., 2019. Sugar palm (*Arenga pinnata* (Wurmb.) Merr) cellulosic fibre hierarchy: A comprehensive approach from macro to nano scale. *Journal of Materials Research and Technology*, 8(3), pp.2753-2766.
48. Ilyas, R.A., Sapuan, S.M., Ibrahim, R., Abral, H., Ishak, M.R., **Zainudin, E.S.**, Atikah, M.S.N., Nurazzi, N.M., Atiqah, A., Ansari, M.N.M. and Syafri, E., 2019. Effect of sugar palm nanofibrillated cellulose concentrations on morphological, mechanical and physical properties of biodegradable films based on agro-waste sugar palm (*Arenga pinnata* (Wurmb.) Merr) starch. *Journal of Materials Research and Technology*, 8(5), pp.4819-4830.
49. Atikah, M.S.N., Ilyas, R.A., Sapuan, S.M., Ishak, M.R., **Zainudin, E.S.**, Ibrahim, R., Atiqah, A., Ansari, M.N.M. and Jumaidin, R., 2019. Degradation and physical properties of sugar palm starch/sugar palm nanofibrillated cellulose bionanocomposite. *Polimery*, 64(10), pp.680-689.
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51. Jesuarockiam, N., Jawaid, M., **Zainudin, E.S.**, Thariq Hameed Sultan, M. and Yahaya, R., 2019. Enhanced thermal and dynamic mechanical properties of synthetic/natural hybrid composites with graphene nanoplateletes. *Polymers*, 11(7), p.1085.

52. Ramlee, N.A., Jawaid, M., **Zainudin, E.S.** and Yamani, S.A.K., 2019. Tensile, physical and morphological properties of oil palm empty fruit bunch/sugarcane bagasse fibre reinforced phenolic hybrid composites. *Journal of Materials Research & Technology*, 8(4), pp.3466-3474.
53. Naveen, J., Jawaid, M., **Zainudin, E.S.**, Sultan, M.T., Yahaya, R. and Majid, M.A., 2019. Thermal degradation and viscoelastic properties of Kevlar/Cocos nucifera sheath reinforced epoxy hybrid composites. *Composite Structures*, 219, pp.194-202.
54. Alaaeddin, M.H., Sapuan, S.M., Zuhri, M.Y.M., **Zainudin, E.S.** and Al-Oqla, F.M., 2019. Physical and mechanical properties of polyvinylidene fluoride-Short sugar palm fiber nanocomposites. *Journal of Cleaner Production*, 235, pp.473-482.
55. Ibrahim, M.I.J., Sapuan, S.M., **Zainudin, E.S.** and Zuhri, M.Y.M., 2019. Potential of using multiscale corn husk fiber as reinforcing filler in cornstarch-based biocomposites. *International journal of biological macromolecules*, 139, pp.596-604.
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