UNIVERSITI TEKNIKAL MALAYSIA MELAKA

Curriculum Vitae

PERSONAL PARTICULARS

Name: Dr. Zaleha binti Mustafa, C.Eng (MIMech, UK)

Current Position: Associate Professor,

Faculty of Manufacturing Engineering, UTeM, Universiti Teknikal Malaysia Melaka, 76100 Durian Tunggal, Melaka.

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ACADEMIC AND PROFESSIONAL QUALIFICATIONS

Year	*Degree*	*Discipline*	*University*
2002	Bachelor of Materials Engineering (Hons)	Materials Engineering	University Science Malaysia
2005	MSc. with Distinction	Biomaterials	University of London, UK
2012	Phd in Mechanical Engineering	Polymer Composite	University of Glasgow, UK

Thesis Tittle

Phd: Multiaxial fatigue characterization of self-reinforced polylactic acid - calcium phosphate composite, University of Glasgow, United Kingdom, 2012

Msc: The testing of fibre reinforced composites for metacarpal fixation, Queen Mary, University of London, 2005

BEng: Investigation of Wood flour reinforced kaolin composite for building application, University Science Malaysia, Malaysia, 2002

Main Areas of Research Interest

Biomaterials; Polymer composite; Natural fibre, degradable polymer, fatigue of materials

Professional Affliations

1. Chartered Engineer (C.Eng), Institute of Mechanical Engineers, UK. (Reg no: 660894)
2. Graduate Engineer, Board of Engineers Malaysia, member since 2006 (Reg no. 56042A)
3. Graduate Members, The Institution of Engineers Malaysia, member since 2012(reg No: G60009)
4. Institute of Materials Malaysia, member since 2006 (Reg no.2025)

RESEARCH PROJECTS & GRANTS

2019

1. FRGS/1/2019/TK05/UNIMAP/02/6: Dual functionalization of Nano-crystalline dolomite to improve the mechanical performance of biomedical poly (ethylene-co vinyl- acetate) Nano composite, RM 115 782.00, 2019-2022- Co –researcher.

2. High Impact Short Term Grant: Durability of Eco-Friendly Wood Polymer Composite Under Dynamic Conditions for Sustainable Applications, RM 30 000, 2019-2021- *Lead researcher (collaboration research with Prince of Songkla University, Thailand)*

3. Short Term Grant: Developtment of the suspended hydrogel bioprinter through 3D printer modification, RM 20 000, 2019-2020- Co- researcher

2018

4. FRGS/1/2018/TK10/UTEM/02/4: Influence of Filler Content on Direct Sintering Mechanism of Green Glass Composite for Physico-Mechanical Performance, RM 94 430.00, 2018-2021- *co-researcher*

5. FRGS/1/2018/TK05/UTEM/02/13: Interface dissociation mechanism in multiwall carbon nanotube-filled electrically conductive adhesive by hygro-thermal effect, RM 61 000.00, 2018-2021- *co-researcher*

6. PJP /2018/FKP(9A)/S01590: Fabrication of reclaimed carbon fibre composite from reclaimed carbon fibre non-woven for fairing automotive application; RM 20 000, 15 Feb 2018- 14 Feb 2019; co-researcher

7. PJP /2018/FKP(3A)/S01583: Study on deposition of Copper –TiO2 coating for Photocatalytic application using simple cold spray coating; RM 20 000; 15 Feb 2018- 14 Feb 2019; *co-researcher*

2017

8. Applied Orientated Short Research grant-UTeM: Pyrolysis of industrial waste cured carbon fibre for secondary structural application (RM 25,000); June 2017- November 2018; *Co-researcher*

2016

9. High Impact Short Term Grant- UTeM: Enhanced Interlayer Properties of Glass Fibre Laminate using CNT filled adhesives printed circuit board, (RM 44 000); March 2016 – 31 August 2017); Co-Researcher

10. International Grant- Jabil Electronics: Bonding Materials Enhancement for Surface Mount Component on Plastic Assembly, (USD 5000), Dec 2015-Dec 2018, Co- Researcher

11. PPRN 2016-G00043- UTEM- ZFH Industries Sdn. Bhd: Fundamental Solution on Wood Plastic Composite Properties (RM 23 075); Principal Researcher.

2015

12. Short Term Grant – UTeM: Fabrication and Evaluation of Nylon 6 Electrospun Nanofiber Filter Media for removing suspended solids from water (RM 14 500), Dec 2015- May 2017, Co-Researcher

2014

13. RAGS/1/2014/TK04/FKP/B00073: Effect of polymeric coating on the in-vitro degradation of the Bioactive Tricalcium Phosphate Scaffold (RM 57 250); 2014-2017- Lead Researcher

14. RAGS/1/2014/TK04/FKM/B00069: The effect of PLA matrix architecture on the mechanical performance of PLA-based degradable biocomposites (RM 52 000); 2014-2017-*Co-Researcher*

15. RAGS/1/2014/TK04/FKP/B00072: Enhancing Thermo Mechanical Properties of Nano Modified Polymer Composite Material Modification of CNT Surface (RM 52 000); 2014-2017, *Co-Researcher*

16. FRGS/2/2014/TK04/FKP/03/F00241: Formation of TiO2-Co3O4 Bi-component Nanotubes via Robust Anodization and Sol Gel Process (RM 94 200), 2014-2017-*Co-Researcher*

17. FRGS/1/2014/SG06/USM/01/1: Bonding mechanisms in ceramic polymer biocomposites to produce polymer encapsulated Porous β-Tricalcium Phosphate Scaffolds (RM 126 000); 2014-2018-*Co-Researcher*

18. FRGS/1/2014/TK04/UTEM/02/2: Effects of Ag content on the microstructure and antimicrobial performance of Ag-TiO2 coating deposited on ceramic substrates; (RM 122 000);2014-2018 *Co-Researcher*

19. PRGS/1/2014/TK04/UTEM/02/1: Green Innovative Glass Ceramic (GIG): Towards Resources Efficiency in tile industry (RM 241 000*). 2014-2017-Co-Researcher*

20. PJP/2014/FKM(1B)/S01294: Investigation on surface diffusivities using superlastic coating and additive layer techniques to enhance wear- resistant of stainless steel, 2014-2016, *Co-Researcher*

2013

21. PJP/2013/FKP (2A)/S01149: Effect of carbon on the thermal properties of ceramic glass produce from waste glass: Fabrication and Characterisation. (RM19 300),2013-2014- *Lead Researcher.*

22. PJP/2013/FKEKK(8B)/S1163: Novel Adaptive MEMS Cochlear Biomodel for Neuromorphic Auditory Application: Device Design, Fabrication and Characterisation, Short term Grant: (RM20 000) *Co-Researcher- completed*

23. PJP/2013/FKP(9A)/S01190 Development and Characterization of Glass Waste Reinforced Spent Bleach Earth (SBE) for Green Technology. Short term Grant: (RM14 800); *Short Term Grant- Co-Researcher- completed*

EMPLOYMENT HISTORY

March 2020- Currently
Position: Associate Professor, Faculty of Manufacturing Engineering, UTeM

Responsibilities:

- Active role in teaching and learning for various engineering subject
- Led a team of research group for undergraduate and postgraduate program
- To promote research collaboration with external parties
- Active participation in consultancy activities

Nov 2013- March 2020

Position : Senior Lecturer, Faculty of Manufacturing Engineering, UTeM

May 2015- 2016
Position: Manager of Advanced Manufacturing Centre of Excellent, UTeM
Responsibility:

- To prepare strategic planning on research and development of AMC and UTeM
- To promote inter-disciplinary and inter-college research activities
- To promote research collaboration with external parties
- To coordinate and manage all vetting procedures of research proposals

Mar 2014- August 2014

Industrial Attachment at Malaysian Industry-Government Group for High Technology (MIGHT), Cyberjaya

Responsibility: Direct and coordinate and provide strategic input for Advance Material division

April 2006- Jan 2008- Head of Materials Engineering Department, Faculty of Manufacturing Engineering, UTeM
Responsibility

- Led a team to prepare the strategic planning on the teaching, lab development and facilities for the Faculty of Manufacturing Engineering

- Led the Materials Department's team consisting professor, senior lecturer and engineers revising new curriculum syllabus for Manufacturing Engineering program specialized in Engineering Materials.
- Wrote and evaluated a new technical specification for lab equipment worth of RM 6 millions
- Chairs and led academic advising and consultation with students
- Led and presented teaching skill course such as critical thinking program, problem based learning program, module writing and others
- Delivering lectures in various engineering subjects

March 2003- March 2004
Position: Engineer
Responsibilities:

- Responsible for the quality control of the production to ensure it is within the specification using scientific equipment such as ICP, Spark Machine and others
- Led the R&D lab set-up project, handling the Scanning Electron Microscope (SEM) to analyze the failure of the products and also provide analysis for the customers

TEACHING

(Course taught at Postgraduate(PG) and Undergraduate (UG) Level)

Teaching Assignments at Universiti Teknikal Malaysia Melaka, Malaysia:

1. Materials Selection in Mechanical Design, **PG** & UG, 2019 -current
2. Research Methodology, **PG** 2013 -current
3. Advanced Materials , UG, 2021-current
4. Strength of Materials, UG, 2019 - 2020
5. Green Materials and Biomaterials, **UG** , 2017 -2020
6. Engineering Materials, **UG**, 2006- till current
7. Engineering Materials Lab, **UG**, 2013-2016, 2019
8. Composite and Advanced Materials ,**UG**, 2013-2016
9. Polymer Engineering**, UG**, 2006-2008
10. Composite Engineering and Processing, **UG** , 2006-2008

Teaching Assignments at University of Glasgow:

1. Advance Composite Manufacturing, **PG**, 2011-2012
2. Materials Lab, **UG**, 2010 -2012

Teaching Assignments at Queen Mary, University of London:

1. Materials Selection in Mechanical Design, **UG**, 2005-2006

SUPERVISION

<u>Postgraduate</u>

MEng/Msc

1. Tuan Muhammad Idzuddin Tuan Nawi, 2021 (MEng), Principal Supervisor –completed
   Thesis title: Fatigue of rubberwood reinforced recycled polypropylene composite
2. Adebayo Ademola Babatope (M051710012), 2019 (MEng), Principal Supervisor -completed
   Thesis title: Accelerate weathering of recycle polypropylene reinforced rubberwood composite.
2. Nurul Anirah Shahira Muhamad Razali, (MSc Candidate), 2017-current- Principal Supervisor
   Thesis title: Mechanical and degradation behaviour of Pineapple leaf fibre reinforced polylactic acid composites

3. Muhammad Taufiq bin Jumadi (MSc) 2016-2018, co-supervisor-completed
   Thesis title: Investigation on Mechanical and Morphological Properties of Kenaf Reinforced Recycled Polypropylene and Polyethylene Composites

4. Norfatiha Ishak (MSc), 2015- 2019- Principal Supervisor- completed
   Thesis title: Fabrication and Characterization of Polyhydroxybutyrate-co-valerate coated Tri-calcium Phosphate Scaffold for Bone Tissue Engineering.

5. Rabiatul Adawiyah Abdullah (MSc), 2015-2018- Co-Supervisor- completed
   Thesis title: Effect of the matrix architecture on the Pineapple leaf fibre reinforced Poly Lactic Acid composites

6. Mazlan bin Ishak, 2018 (MEng) Principal Supervisor- completed
   Thesis title: Investigation of Compression Failure in woven carbon woven laminate composite

7. Mohd Khairul Izzany B. Mohd Khair, 2016 (MEng) Principal Supervisor – completed.
   Thesis: Evaluation of Polypropylene - Styrene Acrylonitrile (PP-SAN) Blends Ratio on Their Mechanical Properties

8. Muhyiaddin Abdul Qadir Bin Abu Bakar, 2015 (MEng), Principal Supervisor-completed
   Thesis title: The degradation study of PVC/ABS Blends during repeated extrusion on thermal and mechanical properties

Phd

9. Asfa Amalia binti Ahmad Fauzi (PhD candidate), 2020 – current, co-supervisor
   Project title: Dual functionalization of nanocrystalline dolomite to improve matrix nanofiller interactions and mechanical performance of biomedical poly (ethylene co-vinyl acetate) nanocomposites

10. Asna Rashidah bt Abdul Hamid (PhD) 2016- 2019-co-supervisor- completed
    Thesis title: Exfoliation strategies of organically modified montmorillonite nanofiller to enhance the performance of ethylene vinyl acetate nanocomposites.

11. Noriqman Hakimi Idrus (PhD candidate)- 2015- current, Principal Supervisor
    Project title: Investigation of drilling parameters and delamination effect in natural fibre reinforced thermoset composite

Undergraduate:

1. Vaseetha Ravichandran, B051710209 (2020/2021).
   Project title: Influence of Hydrothermal Ageing on The Fatigue Behaviour of A Wood Polymer Composite (WPC)

2. Nor Hasmah Ashikin bt Awang, B051720039 (2020/2021).
   Project title:Sound Absorption Properties of Natural Materials and Sandwich Structure Composite

3. Tey Yik Yang, B051610018 (2019/2020)
   Project Title: High cycle fatigue behavior of degradable polylactic based natural fibre composite

4. Effi Nur Shazleen bt Salleh, B051510234 (2018/2019)
   Project Title: Effect of matrix ductility on the pineapple leaf fibre reinforced PLA composite

5. Nur Mastura bt Rahmat, B051510103 (2018/19)
   Project title: Mechanical and surface properties of the aluminium alloys for crochet needle

6. Nurul Shaqirah bt Norhaminudin, B051510059 (2018/19)
   Project title: Investigation of Fatigue behaviour of Pineapple leaf fibre reinforced PLA composite

7. Lee Woei Quan, B051410119 (2017/2018)
   Project title: Optimization of mechanical behavior of reclaimed carbon fiber reinforced Polypropylene using compression moulding

8. Chan Hui Teng, B051410098 (2017/2018)
   Project title: Mechanical and thermal properties of pineapple leaf fiber reinforced poly lactic acid biodegradable composite

9. Puteri Nadiah bt Saiffuddin, B051510011 (2017/2018)

Project title: Utilization of OMMT ground as natural filler in PLA/PBS thermoplastic matrix composite

10. Nor Atirah binti Razid, B051520012 (2018)
    Project Title: Effect of surface treatment on the pineapple leaf fibres and its composite
11. Advin Phang Kok Seng, B051310111 (2016- 2017)
    Project title: Optimization of Bio Active Porous Polymeric Scaffold for Biomedical Materials
12. Muhammad Sharifuddin Bin Abdullah, B051410004 (2016-2017)
    Project title:Mechanical Properties of Reclaimed Carbon Fibre Through Heat Treatment Process
13. Nadzirah Binti Abdul Rahman, B051310110 (2016-2017)
    Project title: Mechanical and Thermal Properties of Recycled Carbon Fibre Reinforced Thermoplastic
14. Noor Afizah Binti Jamil, B051310160 (2016-2017)
    Project title: Characterization of Continuous Pineapple Leaf Fiber Reinforced Polylactic Acid Degradable Composite
15. Foo Yeong Horng, B051210134 (2015-2016)
    Project title: Optical and photoelectrochemical studies of tungsten sulphoselenide Thin Film for Solar Panels
16. Mohammad Al Aziz bin Junid, B051210021 (2015-2016)
    Project title: Optimization of Porous Hydroxyapatite Scaffold Fabrication using Template Method
17. Wilson Lai Wei Chen, B051210005 (2015-2016)
    Project title: Highly Porous and Light Weight Oil Palm Empty Fruit Bunch Fibre reinforced PolyLactide Acid
18. Muhamad Faiz Haiqal bin Abdul Rashid, B051210042 (2015-2016)
    Project title: Optimization study on Process Condition of Durian Shell Pulping towards Hydrophobicity
19. Mohd Saifuddin bin Anwar, B051010042 (2013-2014),
    Project title: The Effect of Filler particle size on the Mechanical and Thermal properties of Glass Ceramic
20. Muhammad Khairul Azhar bin Ab Hamid, B050910029 (2013-2014)
    Project title: Characterization of Calcium Phosphate for Bioactive Bone Filler

LIST OF SELECTED PUBLICATION

Books/Chapter

1. **Zaleha Mustafa,** Chang, S. Y., Fadzullah, S. H. S. M., Osman, A. F., & Ibrahim, I. (2021). Degradable composites: processes and applications. In Design for Sustainability (eds)S.M. Sapuan, Muhd Ridzuan Mansor, Design for Sustainability, Elsevier,pp. 197-228,ISBN 9780128194829,
2. Taufiq, M. J., Mansor, M. R., & **Zaleha Mustafa** (2021). A review of natural fiber reinforced recycled thermoplastic polymer composites, in S.M. Sapuan, Muhd Ridzuan Mansor (eds), Design for Sustainability, Elsevier, pg 173-195, ISBN 9780128194829,
3. Ahsan Q., **Zaleha Mustafa** ., Chang S.Y. (2021) Tribological Properties of Natural Fibre Reinforced Polymer Composites. In: Hameed Sultan M.T., Mohd Jamir M.R., Abdul Majid M.S., Azmi A.I., Saba N. (eds) Tribological Applications of Composite Materials. Composites Science and Technology. Springer
4. M.R. Mansor, **Zaleha. Mustafa** et al, (2018). Recent Advances in Polyethylene-Based Biocomposites in Natural Fiber Reinforced Vinyl Ester and Vinyl Polymer Composites: Development, Characterization and Applications, 71. Elsevier
5. S.H.Sheikh Md Fadzullah and **Zaleha Mustafa** (2016). Fabrication and Processing of Pineapple Leaf Fiber Reinforced Composites. In D. Verma, S. Jain, X. Zhang, & P. Gope (Eds.), Green Approaches to Biocomposite Materials Science and Engineering (pp. 125-147). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-0424-5.ch006
6. **Zaleha Mustafa** and K.E.Tanner (2012), Composite for Hard Tissue Repair in Encyclopaedia of Composites, 2nd Edition, Editors: Luigi Nicolas Assunta Borzacchiello, publisher John Wiley & Sons, Hoboken, New Jersey, ISBN 978-0-470-12828-2.

Jounals Publication

(*limited to the most 5 years recent)*

1. Adnan, Z., Fadzullah, S. H. S. M., Omar, G., **Zaleha Mustafa**, Ramli, M. B., Razali, N., & Kamarolzaman, A. A. (2021). Hybrid Electrically Conductive Adhesive (HECA) Properties as a Function of Hybrid Filler Ratio with Increasing Total Filler Loading. *Electronic Materials Letters*, *17*(4), 369-383.
2. Ishak, N. M., Malingam, S. D., Mansor, M. R., Razali, N., **Zaleha Mustafa** & Ab Ghani, A. F. (2021). Investigation of natural fibre metal laminate as car front hood. *Materials Research Express*, *8*(2), 025303.
3. Mansor, M. R., Zaleha Mustafa, Hadi, M. A. A., Taufiq, M. J., Masripan, N. A., Ratanawilai, T., & Tunggal, D. (2021). Effect of layering sequence on mechanical properties of hybrid oil palm empty fruit bunch/kenaf fibre reinforced epoxy composites. *Jurnal Tribologi*, *29*, 1-10.
4. Z Adnan, SHSM Fadzullah, G Omar, **Zaleha Mustafa** et al., (2020) Hybrid Electrically Conductive Adhesive (HECA) Properties as a Function of Hybrid Filler Ratio with Increasing Total Filler Loading. Electron. Mater. Lett. 17, 369–383 (2021).
5. Ishak, N. M., Malingam, S. D., Mansor, M. R., Razali, N., **Zaleha Mustafa** & Ab Ghani, A. F. (2021). Investigation of natural fibre metal laminate as car front hood. Materials Research Express, 8(2), 025303.
6. Mansor, M. R., **Zaleha Mustafa**, Hadi, M. A. A., Taufiq, M. J., Masripan, N. A., Ratanawilai, T. (2021). Effect of layering sequence on mechanical properties of hybrid oil palm empty fruit bunch/kenaf fibre reinforced epoxy composites. Jurnal Tribologi, 29, 1-10.
7. Fadzullah, S. H. S. M., Adnan, Z., Omar, G., **Zaleha Mustafa**, Masripan, N. A. B., Mansor, M. R., & Salim, M. A. (2020). Effect of Hybridization on the Functional Properties of AgMF–MWCNT-Filled Electrically Conductive Adhesive. Journal of Electronic Materials, 49(11), 6572-6581.
8. Fadzullah, S. S. M., Nasaruddin, M. M., Zaleha Mustafa., Rahman, W. A. W. A., Omar, G., Salim, M. A., & Mansor, M. R. (2020). The Effect of Chemical Surface Treatment on Mechanical Performance of Electrically Conductive Adhesives. Evergreen, 7(3), 444-451.
9. Hamid, A. A., Osman, A. F., **Zaleha Mustafa**., & Ananthakrishnan, R. (2020). PRE-SWELLING PROCESS OF THE SURFACE MODIFIED MONTMORILLONITE (O-MMT) AS A STRATEGY TO ENHANCE EXFOLIATION AND DISPERSION. Journal of Advanced Manufacturing Technology (JAMT), 14(2).
10. Mohammed Fitri, T. F., Osman, A. F., Othman, R., & **Zaleha Mustafa** (2020). Incorporation of Hybrid Pre-Dispersed Organo-Montmorillonite/Destabilized Bentonite Nanofillers for Improving Tensile Strength of PEVA Copolymer with 40% Vinyl Acetate Composition. In Materials Science Forum (Vol. 1010, pp. 118-123). Trans Tech Publications Ltd.
11. Hamid, A. R. A., Osman, A. F., **Zaleha Mustafa,** Mandal, S., & Ananthakrishnan, R. (2020). Tensile, fatigue and thermomechanical properties of poly (ethylene-co-vinyl acetate) nanocomposites incorporating low and high loadings of pre-swelled organically modified montmorillonite. Polymer Testing, 85, 106426.
12. Fadzullah, S. S. M., Ramli, S. N. N., **Zaleha Mustafa**, Z., Razali, A. S., Sivakumar, D., & Ismail, I. (2020). Low velocity impact behaviour of pineapple leaf fibre reinforced polylactic acid biocomposites, Journal of Advanced Manufacturing Technology (JAMT), 14(1).
13. Feng, N. L., Malingam, S. D., Jenal, R., **Zaleha Mustafa**, & Subramonian, S. (2020). A review of the tensile and fatigue responses of cellulosic fibre-reinforced polymer composites. Mechanics of Advanced Materials and Structures, 27(8), 645-660.
14. **Zaleha Mustafa**, Idrus, N. H., Hadzley, A. B. M., Sivakumar, D., Norazlina, M. Y., Fadzullah, S. H. S. M., A. Anjang & Thongkaew, K. (2020). Optimization of drilling process parameters on delamination factor of Jute reinforced unsaturated polyester composite using Box-Behnken design of experiment. Journal of Mechanical Engineering and Sciences, 14(1), 6295-6303.
15. Ng, L. F., Malingam, S. D., Selamat, M. Z., **Zaleha Mustafa** & Bapokutty, O. (2020). A comparison study on the mechanical properties of composites based on kenaf and pineapple leaf fibres. Polymer Bulletin, 77(3), 1449-1463.
16. Mansor, M. R., Taufiq, M. J., **Zaleha Mustafa**, Jumaidin, R., Mastura, M. T., Firdaus, H. M. S., & Basori, B. (2019). Thermal and mechanical behaviour of recycled polypropylene/polyethylene blends of rejected unused disposable diapers. Journal of Advanced Manufacturing Technology (JAMT), 13(3).

17. Razak, J.A., Mohamad, N., Mahamood, M.A., Jaafar, R., Othman, I.S., Ismail, M.M., Tee, L.K., Junid, R. and **Zaleha Mustafa** (2019). On the preparation of EPDM-g-MAH compatibilizer via melt-blending method. Journal of Mechanical Engineering and Sciences, 13(3), pp.5424-5440.
18. N Zulkafli, SD Malingam, SHSM Fadzullah, **Zaleha Mustafa**, KA Zakaria, S Subramonian (2019), Effect of water absorption on the mechanical properties of cross-ply hybrid pseudo-stem banana/glass fibre reinforced polypropylene composite, Materials Research Express, 6(9), pp 095326.
19. AR Toibah, F Misran, A Shaaban, **Zaleha Mustafa** (2019) Effect of pH condition during hydrothermal synthesis on the properties of hydroxyapatite from eggshell waste, Journal of Mechanical Engineering and Sciences, 13(2), pp. 4958-4969
20. Q Ahsan, TSS Carron, **Zaleha Mustafa** (2019) On the use of nano fibrillated kenaf cellulose fiber as reinforcement in polylactic acid biocomposites, Journal of Mechanical Engineering and Sciences,13(2), pp. 4970-4988.
21. N.Zulkafli, S.D.Maligam, S.H.S.M.Fadzullah, **Zaleha Mustafa**, K.A.Zakaria & S.Subramonian, (2019). Mechanical Properties of Cross-Ply Banana-Glass Fibre Reinforced Polypropylene Composites, Defence S and T Technical Bulletin, 12(1), 114-125.
22. MM Nasaruddin, SH Sheikh Md Fadzullah, G Omar, **Zaleha Mustafa**, M Ramli, MZ Akop, IS Mohamad, B Çoşut. (2019). The effect of aspect ratio on multi-walled carbon nanotubes filled epoxy composites as electrically conductive adhesive, Journal of Advanced Manufacturing Technology, 13(1). 1-11.
23. **Zaleha Mustafa,** Ishak, N.F., Othman, R., Ahmad, N., Toibah, A.R., Fadzullah, S.H.S.M, Tanner, K.E., (2018). In-Vitro Apatite growth on porous β-tricalcium Phosphate scaffolds coated with PHVB. Journal of Advanced Manufacturing Technology (JAMT), 12(1 (4)) -*Corresponding author*
24. **Zaleha Mustafa**., N.H Idrus, S.H.S.M. Fadzullah, A.B. Hadzley, A. B…& N.I Omar, N. I. (2018). Influence of curing temperature on mechanical properties of woven jute reinforced polyester composite. Journal of Advanced Manufacturing Technology, 12, 451-460 - *corresponding author*
25. Z.Shamsudin, A.H. Razali, F.H. Suzaim, **Zaleha Mustafa**., A.R Toibah and A. Hodzic, 2018. Preliminary investigation on the physical properties and morphological sintered cockle shell/recycled soda lime silicate composite, Journal of Advanced Manufacturing Technology (JAMT), 12(1 (3)), pp.125-138.
26. A.R Toibah, F. Misran, **Zaleha Mustafa**, A. Shaaban and S.R. Shamsuri, 2018. Calcium phosphate from waste animal bones: phase identification analysis, Journal of Advanced Manufacturing Technology (JAMT), 12(1 (3)), pp.99-110.
27. R. Othman, **Zaleha Mustafa**, N.F. Ishak,A.F.M Noor, (2018), Intermediate phases formed during synthesis of β-tricalcium phosphate via wet precipitation and hydrothermal methods. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 48(2), 141-147. (Scopus) – *corresponding author*
28. Jumadi, M. T., Mansor, M. R., & **Zaleha Mustafa** (2018) Influence of water absorptivity on kenaf fibre reinforced recycled-polymer composite properties. Progress in Industrial Ecology, an International Journal, 12(3), 220-233.
29. Malingam, S. D., Feng, N. L., Sean, N. C., Subramaniam, K., Razali, N., & **Zaleha Mustafa**. (2018). Mechanical properties of hybrid kenaf / kevlar fibre reinforced thermoplastic composites. *Defence S and T Technical Bulletin, 11*(2), 209-224 (Scopus)
30. Mansor, M. R., Jumadi, M. T., Salim, M. A., Akop, M. Z., Tahir, M. M., Noor, **Zaleha Mustafa**. (2018). Characterisation of hybrid oil palm empty fruit bunch and kenaf fibre reinforced thermoplastic composites. Defence S and T Technical Bulletin, 11(2), 225-236
31. Taufiq, M. J., Mansor, M. R., & Zaleha **Mustafa**. (2018). Characterisation of wood plastic composite manufactured from kenaf fibre reinforced recycled-unused plastic blend. Composite Structures, 189, 510-515. (ISI)
32. Dhar Malingam, S., Feng, N. L., Khoon, L. C., Sheikh Md Fadzullah, S. H.,**Zaleha Mustafa**., & Subramonian, S. (2018). The Influences of Fibre Parameters on the Tensile and Flexural Response of Lightweight Thermoplastic Kenaf Fibre Reinforced Metal Composites. Journal of Natural Fibers, 1-13. (Scopus)
33. F Che Ani, A Jalar, R Ismail, **Zaleha Mustafa**, AA Saad, CY Khor, NK Othman, MY Tura Ali, MA Fatah, M Mukhtar, A Abas, (2018) Journal of Advanced Manufacturing Technology, 12 ,413-424 (Scopus)

34. MA A Rahman, NR Mohamad, **Zaleha Mustafa**, S Ismail, AA Abdul Rahman, S Abdullah, E Mohamad, MH Nordin, MR Salleh, Design of Compact Pre-Pregger Machine for In House Production of Pre-Preg Material (2018) Journal of Advanced Manufacturing Technology, 12, 437-450 (Scopus)
35. MT Jumadi, MR Mansor, **Zaleha Mustafa** (2018), Characterisation of wood plastic composite manufactured from kenaf fibre reinforced recycled-unused plastic blend, Composite Structures, vol 189, 510-515.
36. SH Sheikh Md Fadzullah, OF Ifayenfumi, **Zaleha Mustafa**, G Omar (2017), Perforation Behaviour of Composite Sandwich Structure subjected to low velocity impact at oblique angles, International Journal of Automotive and Mechanical Engineering, vol 14, pg 4158
37. R. Othman, Zaleha **Mustafa**, P.T. Kien, N.F. Ishak, A. Shaaban and A.F. Mohd Noor (2017) Parameters affecting the synthesis of tricalcium phosphate powder using a wet precipitation method, Journal of Mechanical Engineering and Sciences, vol. 11(4), pp. 3197-3205- *corresponding author*
38. M.J. Taufiq, **Zaleha Mustafa**, M.R. Mansor (2017), Utilisation of recycled thermoplastics sourced from rejected-unused disposable diapers as polymer blends, Journal of Mechanical Engineering and Sciences, Vol. 11 (4) pp. 3137-43- *corresponding author*
39. R. Othman, **Zaleha Mustafa**, L. Ting (2017), Effects of mechanical activation on the fluxing properties of Gua Musang Feldspar, Journal of Mechanical Engineering and Sciences, vol. 11(4) , pp. 3189-96 -corresponding author
40. N. Salleh, Z. Shamsudin, J. M. Juoi and Zaleha Mustafa (2017) Effects of heating rates and SBE loading on sintered properties of spent bleach earth/recycled glass composite, Journal of Mechanical Engineering and Sciences, Vol. 11, (4), pp. 3104-3115
41. R. Othman, **Zaleha Mustafa** et al., (2017) Effect of Calcination Temperatures on Phase Transformation and Stability of β-Tricalcium Phosphate Powder Synthesized by a Wet Precipitation Method, Solid State Phenomena, Vol. 264, pp. 132-135
42. MSM Jusoh, MYM Yahya, **Zaleha Mustafa**, HAI Ahmad (2017) Effect of layering pattern on mechanical and water absorption properties of glass/flax reinforced epoxy, Journal Teknologi, 79 (5-2), pp. 89-93 *(Scopus)*
43. SNR Ramli, SHS Md. Fadzullah, **Zaleha Mustafa** (2017), The effect of alkaline treatment and fiber length on pineapple leaf fiber reinforced poly lactic acid biocomposites, Journal Teknologi, 79 (5-2), pp. 111-115
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International Proceedings

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1. AH Nurfaizey, FH Abdullah, SH Sheikh Md Fadzullah, **Zaleha Mustafa**, MA Salim, MZ Akop (2019), Investigation on the effects of electrospinning distance and applied voltage on morphology of poly (vinyl alcohol) electrospun nanofibers, Proceedings of Mechanical Engineering Research Day 2019, pp. 306-307.

2. AH Nurfaizey, NA Azmi, NA Masripan, **Zaleha Mustafa**, AM Saad, F Wasbari (2019) A study on tensile properties of poly (vinyl alcohol) electrospun nanofibers, Proceedings of Mechanical Engineering Research Day 2019, 308-309.
3. Z Shamsudin, M Mesri, R Hasan, J M Juoi, **Zaleha Mustafa** (2019), Thermal properties and structure morphology of SLSG/SBE: Effect of filler content, Proceedings of Mechanical Engineering Research Day 2019, pp 57-58.
4. Bahril, N. H. S., Sahroni, T. R., & Zaleha **Mustafa** (2018,). Failure model for bioactive degradable composite. In IOP Conference Series: Earth and Environmental Science (Vol. 195, No. 1, p. 012030). IOP Publishing.
5. Kumarasamy, S., Abidin, M. S. Z., Bakar, M. A., Nazida, M. S., **Zaleha Mustafa.**, & Anjang, A. (2018, May). Effects of High and Low Temperature on the Tensile Strength of Glass Fiber Reinforced Polymer Composites. In IOP Conference Series: Materials Science and Engineering (Vol. 370, No. 1, p. 012021). IOP Publishing.
6. A. S Razali, **Zaleha Mustafa**, A.Shaaban, S.H. Sheikh Md Fadzullah, Z.Shamsudin, A.R. Toibah, A. Anjang, Mechanical degradation of pineapple leaf fibre reinforced polylactic acid green composite due to hydrolysis exposure(2018), Proceedings of Mechanical Engineering Research Day 2018, pp.239
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9. NF Ishak, **Zaleha Mustafa**, R Othman, SH Sheikh Md Fadzullah, AR Mahamad Sahab (2016) Effect of sintering on the physical properties of porous β-TCP scaffolds, Proceedings of Mechanical Engineering Research Day 2016, pp 135-136
10. SHSM Fadzullah, **Zaleha Mustafa**, SNR Ramli (2016) The effect of fiber length on the mechanical properties of pineapple leaf (PALF) fiber reinforced PLA biocomposites, Proceedings of Mechanical Engineering Research Day 2016, pp.123-124
11. Z Shamsudin, N Salleh, **Zaleha Mustafa**, MAA Bakar, R Hasan (2016) Influence of size particles of SLS glass on properties of sintered SBE reinforced glass waste composite, Proceedings of Mechanical Engineering Research Day 2016,pp.112-113
12. SNR Ramli, S Fadzullah, **Zaleha Mustafa** (2016) Mechanical performance of pineapple leaf fiber reinforced poly lactic acid (PLA) biocomposites, Proceedings of Mechanical Engineering Research Day 2016, pp

Module

1. **Zaleha Mustafa,** Basic Engineering Materials for Young Engineers for Beginner (2018), FKP, Penerbit UTeM
2. **Zaleha Mustafa**, Processes of Engineering Materials for Young Engineers, (2018), FKP, Penerbit UTeM

AWARDS/ACADEMIC RECOGNITIONS

1. Invited Speaker at Tokushima University's Spring School, Japan March 2019
2. Visiting Professor at Prince Songkla University, Thailand, 15th Jan – 15th Feb 2018
3. Recipient of the Excellent Service Award 2016 for Outstanding Achievement in Service, Faculty of Manufacturing Engineering, UTEM, 8th March 2017
4. Awarded the Silver Medal, for invention of Ecoslate Composite Roof Tiles at the UTEM Innovation, Invention & Technology Exhibition , Malacca, Malaysia, 7- 9 Nov 2017
5. Awarded the Bronze Medal, for invention of Ecopine Panel –Green and Lightweight Composite for Automotive Rooftop Frame at the UTEM Innovation, Invention & Technology Exhibition, Malacca, Malaysia, 7-9 Nov 2017
6. Awarded the Bronze Medal, for invention of Eco-Hybrid Polymer Biocomposites at the UTEM Innovation, Invention & Technology Exhibition, Malacca, Malaysia, 7-9 Nov 2017

7. Awarded the Silver Medal, for invention of Porous Ceramic for Biomedical Scaffold at the UTEM Innovation, Invention & Technology Exhibition, Malacca, Malaysia, 25 Ogos 2016
8. Recipient of the Armours and Brassier Travel Award, UK, 2011
9. Recipient of the Excellent Service Award 2007 for Outstanding Achievement in Service, Faculty of Manufacturing Engineering, UTEM, 8th March 2008

CONSULTATION & INDUSTRIAL COLLABORATIONS

MOU/MOA

1. Investigation of durability of wood polymer composite – Prince Songkla University, Thailand & UTEM, 2019-2021 Project Leader
2. Konica Minolta Business Technology (M) S/B & UTEM (2018) - project member
3. Recycling Carbon Fibre , Agensi Nuklear Malaysia, USM, CTRM Sdn. Bhd dan UTeM, 2017-2019- project member
4. Bonding material enhancement for surface mount on low temperature substrate attachment, Jabil Circuits Sdn. Bhd – UTeM, 2017-2018, project member

Industrial Consultation

1. Industrial Advisor for G7Aerospace Sdn.Bhd, Selangor, March 2019 – Feb 2020
2. Industrial Advisor to Pryms Consumer Sdn. Bhd, Tajung Keling, Malacca (Nov 2018- April 2019)
3. Lead consultant - Morphology Testing and Analysis of Steel Wire and Pins – for Prym Consumer Malaysia S.B- Project Leader
4. Project Leader on -Characterization and Analysis Techniques – for MMU,
5. Project Leader on Short course on Testing Analysis for University Telekom, 2018
6. Project Leader on Short course on testing analysis of composite materials for CTRM Sdn. Bhd, Malacca, 2017,
7. Project leader for Failure analysis with EFGOS Sdn. Bhd (2016),
8. Trainer for Characterization of Processing of Ceramic Materials Training Program with Jabatan Mineral and Geosains Malaysia (2016)