CURRICULUM VITAE

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Education

1. PhD Aerospace Engineering, 2018, Universiti Putra Malaysia.
2. B.Eng. Aircraft and Space Engineering, 2014, Moscow Aviation Institute.

Areas of Interest

1. Composites/Biocomposites.
2. Low and High Velocity Impact.
3. Materials Characterization.
4. Non-Destructive Testing (NDT)

Professional Qualification/Membership/Affiliation

1. Graduate Technologist, Malaysian Board of Technologist (MBOT)

Appointments

Position	Duration
Universiti Putra Malaysia	
1. Senior lecturer	2022 to date
2. Post-Doctoral Researcher	2020-2021
3. Post-Doctoral Research Assistant	2018-2020

Administrative Works

Position	Date Appointed
1. Committee, Inaugural Lecture Series, Putra Unmanned Aerial Vehicle (PUTRA UAV): From Agricultural Biomass to A Biocomposite Flying Drone	2021
2. Organizing Committee, 1st International Conference on Safe Biodegradable Packaging Technology	2018
3. Organizing Committee, 3rd Malaysia Super Satellite Campus, International Workshop on Engineering and Health Science	2017
4. Organizing Committee, International Workshop on Advanced Composites and Its Manufacturing	2017

Publications

Journals

1. Khan, T., Sultan, M.T.H., Jawaid, M., Safri, S.N.A., **Shah, A.U.M.,** Majid, M.S.A., Zulkepli, N.N., & Jaya, H. (2021) The effects of stacking sequence on dynamic mechanical properties and thermal degradation of kenaf/jute hybrid composites. *Journal of Renewable Materials,* 2164-6341, v9(1): pp 73-84. doi: 10.32604/jrm.2021.011385.
2. Khan, T., Sultan, M.T.H., **Shah, A.U.M.,** Ariffin, A.H., & Jawaid, M. (2021) The effects of stacking sequence on the tensile and flexural properties of kenaf/jute fibre hybrid composites. *Journal of Natural Fibers*, 1544-0478, v18(3): pp 452-463. doi: 10.1080/15440478.2019.1629148
3. **Md Shah, A.U.,** Sultan, M.T.H., & Jawaid, M. (2021) Sandwich-structured bamboo powder/glass fibre-reinforced epoxy hybrid composites – Mechanical performance in static and dynamic evaluations. *Journal of Sandwich Structures and Materials*, 1099-6362, v23(1): pp 47-64. doi: 10.1177/1099636218822740
4. Arumugam, S., Kandasamy, J., Sultan, M.T.H., **Shah, A.U.M.,** & Safri, S.N.A. (2021) Investigations on fatigue analysis and biomimetic mineralization of glass fiber/sisal fiber/chitosan reinforced hybrid polymer sandwich composites. *Journal of Materials Research and Technology,* 2238-7854, v10: pp 512-525. doi: 10.1016/j.jmrt.2020.11.106
5. Loganathan, T.M., Sultan, M.T.H., Ahsan, Q., Jawaid, M., & **Shah, A.U.M.** (2021) Comparative study of mechanical properties of chemically treated and untreated Cyrtostachys renda fibers. *Journal of Natural Fibers,* 1544-046X. doi: 10.1080/15440478.2021.1902900
6. Loganathan, T.M., Sultan, M.T.H., Ahsan, Q., **Shah, A.U.M.**, Jawaid, M., Talib, A.R.A., & Basri, A.A. (2021) Physico-mechanical and flammability properties of Cyrtostachys renda fibers reinforced phenolic resin bio-composites. *Journal of Polymers and The Environment.* doi: 10.1007/s10924-021-02135-0
7. Bhat, A., Budholiya, S., Raj, S.A., Sultan, M.T., Hui, D., **Shah, A.U.M.,** & Safri, S.N.A. (2021) Review on nanocomposites based on aerospace applications. *Nanotechnology Reviews,* v10(1): pp 237-253. doi: 10.1515/ntrev-2021-0018
8. Loganathan, T.M., Sultan, M.T.H., Muhammad Amir, S.M., Jamil, J., Yusof, M.R., & **Md Shah, A.U.** (2021) Infrared thermographic and ultrasonic inspection of randomly-oriented short-natural fiber-reinforced polymeric composites. *Frontiers in Materials.* doi: 10.3389/fmats.2020.604459
9. Budholiya, S., Bhat, A., Raj, S.A., Sultan, M.T.H., **Shah, A.U.M.** & Basri, A.A. (2021) State of the art review about bio-inspired design and applications: An aerospace perspective. *Applied Sciences,* v11(11). doi: 10.3390/app11115054
10. Ibrahim, N.I., Shahar, F.S., Sultan, M.T.H., **Shah, A.U.M.,** Safri, S.N.A., & Mat Yazik, M.H. (2021) Overview of Bioplastic Introduction and Its Applications in Product Packaging. *Coatings.*
11. Loganathan, T.M., Sultan, M.T.H., Jawaid, M., Ahsan, Q., Naveen, J., **Shah, A.U.M,** Talib, A.R.A., & Basri, A.A. (2021) Physical, mechanical, and morphological properties of hybrid *Cytostachys renda*/kenaf fiber reinforced with multi-walled carbon nanotubes (MWCNT)-phenolic composites. *Polymers*
12. Najeeb, M.I., Sultan, M.T.H., Shah, A.U.M., Amir, S.M.M., Safri, S.N.A., Jawaid, M., & Shari, M.R. (2021) Low velocity impact analysis of pineapple leaf fiber (PALF) hybrid composites. *Polymers*
13. Shinde, A., Siva, I., Munde, Y., Deore, V., Sultan, M.T.H., **Shah, A.U.M.,** & Mustapha, F. (2021) Testing of silicon rubber/montmorillonite nanocomposite for mechanical and tribological performance. *Nanomaterials*
14. Loganathan, T.M., Sultan, M.T.H., Ahsan, Q., Jawaid, M., Naveen, J., **Shah, A.U.M,** Talib, A.R.A., Basri, A.A. & Jaafar, C.N.A. (2021) Effect of *Cytostachys renda* fiber loading on the mechanical, morphology, and flammability properties of multi-walled carbon nanotubes/phenolic bio-composites. *Nanomaterials*
15. Sanmuham, V., Sultan, M.T.H., Radzi, A.M., Shamsuri, A.A., **Shah, A.U.M**., Safri, S.N.A., & Basri, A.A. (2021) Effect of silver nanopowder on mechanical, thermal and anti-microbial properties of Kenaf/HDPE Composites. *Polymers*
16. Loganathan, T.M., Sultan, M.T.H., Jawaid, M., **Md Shah, A.U.,** Ahsan, Q., Mariapan, M., & Majid, M.S.A. (2020) Physical, thermal and mechanical properties of Areca fibre reinforced polymer

composites — an overview. *Journal of Bionic Engineering,* 1672-6529, v17(1): pp 185-205. doi: 10.1007/s42235-020-0015-6

17. Najeeb, M.I., Sultan, M.T.H., Andou, Y., **Shah, A.U.M.,** Eksiler, K., Jawaid, M., & Ariffin, A.H. (2020) Characterization of lignocellulosic biomass from Malaysian's Yankee pineapple AC6 Toward Composite Application. *Journal of Natural Fibers*, 1544-0478. doi: 10.1080/15440478.2019.1710655
18. Mat Yazik, M.H., Sultan, M.T.H., **Shah, A.U.M.,** & Norkhairunnisa, M. (2020) Effect of MWCNT content on thermal and shape memory properties of epoxy nanocomposites as material for morphing wing skin. *Journal of Thermal Analysis and Calorimetry*, 1388-6150, v139(1): pp 147-158. doi: 10.1007/s10973-019-08367-6
19. Mat Yazik, M.H., Sultan, M.T.H., **Shah, A.U.M.,** Jawaid, M., & Norkhairunnisa, M. (2020) Effect of nanoclay content on the thermal, mechanical and shape memory properties of epoxy nanocomposites. *Polymer Bulletin*, 1436-2449, v77(11): pp 5913-5931. doi: 10.1007/s00289-019-03049-7
20. Najeeb, M.I., Sultan, M.T.H., Andou, Y., **Shah, A.U.M.,** Eksiler, K., Jawaid, M., & Ariffin, A.H. (2020) Characterization of silane treated Malaysian Yankee pineapple AC6 leaf fiber (PALF) towards industrial applications. *Journal of Materials Research and Technology*, 2238-7854, v9(3), pp 3128-3139. doi: 10.1016/j.jmrt.2020.01.058
21. Loganathan, T.M., Sultan, M.T.H., Ahsan, Q., Jawaid, M., Naveen, J., **Md Shah, A.U.,** & Hua, L.S. (2020) Characterization of alkali treated new cellulosic fibre from Cyrtostachys renda. *Journal of Materials Research and Technology*, 2238-7854, v9(3): pp 3537-3546. doi: 10.1016/j.jmrt.2020.01.091
22. Nadzri, S.N.I.H.A., Sultan, M.T.H., **Shah, A.U.M.,** Safri, S.N.A., Talib, A.R.A., Jawaid, M., & Basri, A.A. (2020) A comprehensive review of coconut shell powder composites: Preparation, processing and characterization. *Journal of Thermoplastic Composite Materials*, 1530-7980, pp 1-24. doi: 10.1177/0892705720930808
23. **Shah, A.U.M.,** Safri, S.N.A., Thevadas, R., Noordin, N.K., Rahman, A.A., Sekawi, Z., Ideris, A., & Sultan, M.T.H. (2020) COVID-19 outbreak in Malaysia: actions taken by the Malaysian government. *International Journal of Infectious Diseases,* 1201-9712, v97: pp 108-116. doi: 10.1016/j.ijid.2020.05.093
24. **Md Shah, A.U.,** Sultan, M.T.H., & Safri, S.N.A. (2020) Experimental evaluation of low velocity impact properties and damage progression on bamboo/glass hybrid composites subjected to different impact energy levels. *Polymers,* 2073-4360, v12(6): pp 1-14. doi: 10.3390/polym12061288
25. Ahmad Nadzri, S.N.Z., Hameed Sultan, M.T., **Shah, A.U.M.,** Safri, S.N.A., & Basri, A.A. (2020) A review on the kenaf/glass hybrid composites with limitations on mechanical and low velocity impact properties. *Polymers,* 2073-4360, v12(6): pp 1-13. doi: 10.3390/polym12061285
26. Mazlan, A.A., Sultan, M.T.H., Safri, S.N.A., Saba, N., **Shah, A.U.M.,** & Jawaid, M. (2020) The effect of fibre length on flexural and dynamic mechanical properties of pineapple leaf fibre composites. *Journal of Renewable Materials,* 2164-6341, v8(7): pp 1-12. doi: 10.32604/jrm.2020.08724
27. Nayak, S.Y., Sultan, M.T.H., Shenoy, S.B., Kini, C.R., Samant, R., **Shah, A.U.M.,** & Amuthakkannan, P. (2020) Potential of natural fibers in composites for ballistic applications – a review. *Journal of Natural Fibers,* 1544-046X, pp 1-11. doi: 10.1080/15440478.2020.1787919
28. Yazik, M.H.M., Sultan, M.T.H., Mazlan, N., Talib, A.R.A., Naveen, J., **Shah, A.U.M.,** & Safri, S.N.A. (2020) Effect of hybrid multi-walled carbon nanotube and montmorillonite nanoclay content on mechanical properties of shape memory epoxy nanocomposite. *Journal of Materials Research and Technology*, 2238-7854, v9(3): pp 6085-6100. doi: 10.1016/j.jmrt.2020.04.012
29. Amir, S.M.M., Sultan, M.T.H., **Shah, A.U.M.,** Jawaid, M., Safri, S.N.A., Mohd, S., & Salleh, K.A.M. (2020) Low velocity impact and compression after impact properties on gamma irradiated kevlar/oil palm empty fruit bunch hybrid composites. *Coatings,* 2079-6412, v10(7): pp 1-15. doi: 10.3390/coatings10070646
30. Arumugam, S., Kandasamy, J., **Md Shah, A.U**., Sultan, M.T.H., Safri, S.N.A., Majid, M.S.A.,

Basri, A.A., & Mustapha, F. (2020) Investigations on the mechanical properties of glass fiber/sisal fiber/chitosan reinforced hybrid polymer sandwich composite scaffolds for bone fracture fixation applications. *Polymers,* 2073-4360, v12(7): pp 1-19. doi: 10.3390/polym12071501

31. Safri, S.N.A., Sultan, M.T.H., & **Shah, A.U.M.** (2020) Characterization of benzoyl treated sugar palm/glass fibre hybrid composites. *Journal of Materials Research and Technology*, 2238-7854, v9(5): pp 11563-11572. doi: https://doi.org/10.1016/j.jmrt.2020.08.057
32. Rajesh, M., Jayakrishna, K., Sultan, M.T.H., Manikandan, M., Mugeshkannann, V., **Shah, A.U.M.,** & Safri, S.N.A. (2020) The hydroscopic effect on dynamic and thermal properties of woven jute, banana, and intra-ply natural fiber composites, *Journal of Materials Research and Technology*, 2238-7854, v9(5): pp 10305-10315. doi: 10.1016/j.jmrt.2020.07.033
33. Shahar, F.S., Hameed Sultan, M.T., **Shah, A.U.M.,** & Azrie Safri, S.N. (2020) A comparative analysis between conventional manufacturing and additive manufacturing of ankle-foot orthosis. *Applied Science and Engineering Progress*, v13(2): pp 96-103. doi: 10.14416/j.asep.2020.03.002
34. Abidin, N.M.Z., Sultan, M.T.H., Hua, L.S., Basri, A.A., **Md Shah, A.U.M.,** & Safri, S.N.A. (2019). A brief review of computational analysis and experimental models of composite materials for aerospace applications. *Journal of Reinforced Plastics and Composites*, 0731-6844, v38(23-24): pp 1031-1039. doi: 10.1177/0731684419862869
35. Azmi, A.M.R., Sultan, M.T.H., Jawaid, M., **Shah, A.U.M**., Nor, A.F.M., Majid, M.S.A., Muhamad, S., & Talib, A.R.A. (2019) Impact properties of kenaf Fibre/X-ray films hybrid composites for structural applications. *Journal of Materials Research and Technology*, 2238-7854, v8(2): pp 1982-1990. doi: 10.1016/j.jmrt.2018.12.016
36. Ismail, M.F., Sultan, M.T.H., Hamdan, A., **Shah, A.U.M.,** & Jawaid, M. (2019) Low velocity impact behaviour and post-impact characteristics of Kenaf/glass hybrid composites with various weight ratios. *Journal of Materials Research and Technology*, 2238-7854, v8(3): pp 2662-2673. doi: 10.1016/j.jmrt.2019.04.005
37. Hamidon, M.H., Sultan, M.T.H., Hamdan, A., & **Shah, A.U.M.** (2019) Effects of fibre treatment on mechanical properties of kenaf fibre reinforced composites: a review. *Journal of Materials Research and Technology*, 2238-7854, v8(3): pp 3327-3337. doi: 10.1016/j.jmrt.2019.04.012
38. Ismail, K.I., Sultan, M.T.H., **Shah, A.U.M.,** Jawaid, M., & Safri, S.N.A. (2019) Low velocity impact and compression after impact properties of hybrid bio-composites modified with multi-walled carbon nanotubes. *Composites Part B: Engineering*, 1359-8368, v163: pp 455-463. doi: 10.1016/j.compositesb.2019.01.026
39. Nor, A.F.M., Sultan, M.T.H., Jawaid, M., Azmi, A.M.R., & **Shah, A.U.M.,** (2019) Analysing impact properties of CNT filled bamboo/glass hybrid nanocomposites through drop-weight impact testing, UWPI and compression-after-impact behaviour. *Composites Part B: Engineering*, 1359-8368, v168: pp 166-174. doi: 10.1016/j.compositesb.2018.12.061
40. Soundhar, A., Rajesh, M., Jayakrishna, K., Sultan, M.T.H., & **Shah, A.U.M.** (2019) Investigation on mechanical properties of polyurethane hybrid nanocomposite foams reinforced with roselle fibers and silica nanoparticles. *Nanocomposites,* 2055-0332, v5(1): pp 1-12. doi: 10.1080/20550324.2018.1562614
41. Amir, S.M.M., Sultan, M.T.H., Jawaid, M., **Shah, A.U.M.,** Hamdan, A., Mohd, S., & Salleh, K.A.M., (2019) Water absorption associated with gamma irradiation on kevlar/oil palm EFB hybrid composites. *International Journal of Recent Technology and Engineering,* 2277-3878, v8(1): pp 444-447
42. Amir, S.M.M., Sultan, M.T.H., Jawaid, M., **Shah, A.U.M.,** Hamdan Ariffin, A., Mohd, S., & Salleh, K.A.M. (2019) Physical changes associated with Gamma irradiation on composites. *International Journal of Recent Technology and Engineering*, 2277-3878, v8(1): pp 438-443
43. Ismail, M.F.B, Sultan, M.T.H., Hamdan Ariffin, A., **Shah, A.U.M.,** Jawaid, M., & Safri, S.N.A. (2019) Kenaf/glass hybrid composites. *International Journal of Recent Technology and Engineering,* 2277-3878, v8(1): pp 456-461
44. Ariffin, A.H., Sultan, M.T.H., Mustapha, F., **Shah, A.U.M.,** & Safri, S.N.A. (2019) Potential of structural health monitoring and micro harvester system for VAWT. *International Journal of Recent Technology and Engineering*, 2277-3878, v8(1): pp 434-437

45. Azmi, A.M.R., Sultan, M.T.H., **Shah, A.U.M.,** Jawaid, M., Nor, A.F.M., & Ismail, K.I. (2019) Flexural properties of kenaf fibre hybrid and non-hybrid composite materials. *International Journal of Recent Technology and Engineering*, 2277-3878, v8(1): pp 467-470
46. Bin Ismail, M.F., Sultan, M.T.H., Hamdan Ariffin, A., **Shah, A.U.M.,** & Safri, S.N.A. (2019) The effect of weight percentage on the tensile properties of glass/kenaf hybrid composites. *International Journal of Recent Technology and Engineering*, 2277-3878, v8(1): pp 462-466
47. Hamidon, M.H., Sultan, M.T.H., Hamdan, A., & **Shah, A.U.M.** (2019) Effects of fibre orientation on mechanical properties of glass/kenaf hybrid composites. *International Journal of Recent Technology and Engineering*, 2277-3878, v8(1): pp 453-455
48. Mazlan, A.A., Sultan, M.T.H., & **Shah, A.U.M.** (2019) The effects of different length of pineapple leaf fibre (PALF) on tensile properties of random oriented composites. *International Journal of Recent Technology and Engineering*, 2277-3878, v8(1): pp 397-400
49. Amir, S.M.M., Sultan, M.T.H., Jawaid, M., Safri, S.N.A., **Shah, A.U.M.,** Yusof, M.R., Naveen, J., Mohd, S., Salleh, K.A.M., Saba, N. (2019) Effects of layering sequence and gamma radiation on mechanical properties and morphology of Kevlar/oil palm EFB/epoxy hybrid composites. *Journal of Materials Research and Technology,* 2238-7854, v8(6): pp 5362-5373. doi: 10.1016/j.jmrt.2019.09.003
50. Shahar, F.S., Hameed Sultan, M.T., Lee, S.H., Jawaid, M., **Md Shah, A.U.,** Safri, S.N.A., Sivasankaran, P.N. (2019) A review on the orthotics and prosthetics and the potential of kenaf composites as alternative materials for ankle-foot orthosis. *Journal of the Mechanical Behavior of Biomedical Materials*, 1751-6161, v99 :pp 169-185. doi: 10.1016/j.jmbbm.2019.07.020
51. Ismail, M.F., Sultan, M.T.H., Hamdan, A., & Shah, **A.U.M.** (2018) A Study on The Low Velocity Impact Response of Hybrid Kenaf-Kevlar Composite Laminates Through Drop Test Rig Technique. *BioResources,* 1930-2126, v13(2): pp 3045-3060. doi: 10.15376/biores.13.2.3045-3060
52. Rajesh, M., Sultan, M.T.H., Uthayakumar, M., Jayakrishna, K., & **Shah, A.U.M** (2018) Dynamic behaviour of woven bio fiber composite. *BioResources*, 1930-2126, v13(1): pp 1951-1960. doi: 10.15376/biores.13.1.1951-1960
53. Ismail, K.I., Sultan, M.T.H., **Shah, A.U.M.,** Mazlan, N., & Ariffin, A.H (2018) Tensile Properties of Hybrid Biocomposite Reinforced Epoxy Modified with Carbon Nanotube (CNT). *BioResources*, 1930-2126, v13(1): pp 1787-1800. doi: 10.15376/biores.13.1.1787-1800
54. **Ain U, M.S.,** Sultan, M.T.H., Francisco, C., Jawaid, M., Talib, A.R.A., & Yidris, N. (2017) Thermal analysis of bamboo fibre and its composites. *Bioresources,* 1930-2126, v12(2): pp 2394-2406. doi: 10.15376/biores.12.2.2394-2406
55. **Ain U, M.S.,** Sultan, M.T.H., Jawaid, M., Francisco, C., & Talib, A.R.A. (2016) A review on the tensile properties of bamboo fiber reinforced polymer composites. *Bioresources*, 1930-2126, v11(4): pp 10654-10676. doi: 10.15376/biores.11.4.Shah
56. Nabila, H., Hamat, S., Arumugam, L., **Umaira, A.,** Alibe, I.M., Golshan, M., & Majid, D.L. (2015) Glass/epoxy woven composite laminate design based on nonlinear results. *ARPN Journal of Engineering and Applied Sciences*, 1819-6608, v10(21): pp 9992-9998

Conference Proceedings

1. Nadzri, S.N.I.H.A., Sultan, M.T.H., **Shah, A.U.M.,** & Safri, S.N.A. (2019) A short review on the use of coconut shell powder as filler in cement concrete. *IOP Conference Series: Materials Science and Engineering,* 1757-8981, v670(1). doi: 10.1088/1757-899X/670/1/012027
2. Shahar, F.S., Sultan, M.T.H., **Shah, A.U.M.,** & Safri, S.N.A. (2019) A short review on the extraction of kenaf fibers and the mechanical properties of kenaf powder composites. *IOP Conference Series: Materials Science and Engineering*, 1757-8981, v670(1). doi: 10.1088/1757-899X/670/1/012028
3. Najeeb, M.I., Sultan, M.T.H., **Shah, A.U.M.,** & Safri, S.N.A. (2019) Static analysis on Malaysian Yankee's pineapple leaf fiber/epoxy composite. *IOP Conference Series: Materials Science and Engineering,* 1757-8981, v670(1). doi: 10.1088/1757-899X/670/1/012032

4. Mazlan, A.A., Sultan, M.T.H., **Shah, A.U.M.**, & Safri, S.N.A. (2019) Thermal properties of pineapple leaf/kenaf fibre reinforced vinyl ester hybrid composites. *IOP Conference Series: Materials Science and Engineering*, 1757-8981, v670(1). doi: 10.1088/1757-899X/670/1/012030
5. Azmi, A.M.R., Sultan, M.T.H., **Shah, A.U.M.,** Jawaid, M., Nor, A.F.M., & Ismail, K.I. (2018) Tensile properties of a kenaf/x-ray film hybrid composite. *AIP Conference Proceedings (4th International Conference on Green Design and Manufacture 2018),* 1551-7616, v2030. doi: 10.1063/1.5066849
6. Ismail, K.I., Sultan, M.T.H., **Shah, A.U.M**., Nor, A.F.M., Azmi, A.M.R., & Ariffin, A.H. (2018) Effect of carbon nanotube (CNT) concentration on flexural properties of flax hybrid bio-composite. *AIP Conference Proceedings (4th International Conference on Green Design and Manufacture 2018*), 1551-7616, v2030. doi: 10.1063/1.5066853
7. Nor, A.F.M., Sultan, M.T.H., **Shah, A.U.M.,** Azmi, A.M.R., & Ismail, K.I. (2018) Carbon nanotubes (CNTs) as nanofillers in bamboo/glass hybrid composites and their effect on tensile, flexural and impact properties. *AIP Conference Proceedings (4th International Conference on Green Design and Manufacture 2018),* 1551-7616, v2030. doi: 10.1063/1.5066812

Chapter in Books

1. Tabrej, K., Sultan, M.T.H., Jawaid, M., **Shah, A.U.M.,** & Sani, S. (2021) Low velocity impact, ultrasonic c-scan and compression after impact of kenaf/jute hybrid composites. *Impact Studies of Composites Materials,* pp 73-85
2. Mazlan, A.A., Sultan, M.T.H., Saba, N., **Shah, A.U.M.,** Safri, S.N.A., Jawaid, M., & Lee, S.H. (2021) A low velocity impact properties of hybrid of pineapple leaf fibre and kenaf fibre reinforced vinyl exter composites. *Impact Studies of Composites Materials,* pp 131-142
3. Abidin, N.M.Z., Sultan, M.T.H., Basri, E.I., Basri, A.A., & **Shah, A.U.M.** (2021) Validation of experimental hybrid natural/synthetic composite laminate specimen using finite element analysis for UAV wing application. *Impact Studies of Composites Materials,* pp 143-160
4. Razali, N., Sultan, M.T.H., **Shah, A.U.M.,** & Safri, S.N.A. (2021) Low velocity impact characterization of flax/kenaf/glass fibre reinforced epoxy hybrid composites. *Impact Studies of Composites Materials,* pp 195-208
5. Shahar, F.S., Sultan, M.T.H., **Shah, A.U.M.** & Safri, S.N.A. (2020) Natural fibre for prosthetic and orthotic applications – a review. *Structural Health Monitoring System for Synthetic, Hybrid and Natural Fiber Composites,* pp 51-70
6. Razali, N., Sultan, M.T.H., Jawaid, M., **Shah, A.U.M.,** & Safri, S.N.A. (2020) Mechanical properties of flax/kenaf hybrid composites. *Structural Health Monitoring System for Synthetic, Hybrid and Natural Fiber Composites,* pp 177-194
7. Amir, S.M.M., Sultan, M.T.H., Jawaid, M., Ariffin, A.H., Mohd, S., Salleh, K.A.M., Ishak, M.R., & **Md Shah, A.U.** (2018) Nondestructive testing method for Kevlar and natural fiber and their hybrid composites. *Durability and Life Prediction in Biocomposites, Fibre-Reinforced Composites and Hybrid Composites,* pp 367-388. doi: 10.1016/B978-0-08-102290-0.00016-7

Edited Books

1. M.T.H. Sultan, **A.U.M. Shah**, N. Saba. Impact Studies of Composite Materials. *Springer Nature*

Research Grants/Consultations

No.	Title	Position	Year	Source ofFund
1.	Knowledge Transfer: An Industry Level Perspective *(£5,000 - completed)*	Member	2020-2021	LIF Community Grant 2020-2021, Royal Academy of Engineering, UK
2.	Isolation and Characterization of Bamboo Nanocellulose as Reinforcement in Bioplastics *(RM 92 000 – on going)*	Member	2019-2022	FRGS (MoE)

Awards and Recognitions					
No.	**Name of award**	**Title**	**Award Authority**	**Award type**	**Year**
1.	Malaysia Technology Expo 2020 (MTE 2020)	Invention and Innovation Silver Award for Category "Machinery, Equipment and Tools Heavy Equipment's Industrial Machinery" for project "Innovatory Pineapple Leaves Fiber Extraction Blade for Fiber Extraction Machine"	The 19th International Expo on Inventions and Innovations	International	2020
2.	Malaysia Technology Expo 2020 (MTE 2020)	Invention and Innovation Bronze Award for Category "Aviation and Transportation" for project "Putra UAV: Novel Bio-Degradable Natural Fiber Composite Material"	The 19th International Expo on Inventions and Innovations	International	2020
3.	Karnival Inovasi UTEMEX 2019	Special Award Winner for project: Putra UAV: Novel Bio-Degradable Natural Fiber Composite	Universiti Teknikal Melaka	National	2019
4.	Karnival Inovasi UTEMEX 2019	Gold Award Winner for project: Putra UAV: Novel Bio-Degradable Natural Fiber Composite	Universiti Teknikal Melaka	National	2019