Muhammad Khusairy Bin Bakri
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Google Scholar | ResearchGate | LinkedIn | Academia.edu | GrowKudos | Scopus | ORCiD | ResearcherID | Publons | Loop

Synergistic Activities: Dr. Muhammad Khusairy Bin Bakri's educational, research, and extension background spans the fields of characterization of bio-composites materials. The characterization of natural fibers for the processing and production of bio-composites, modeling of lignocellulosic composites, converting waste to produce novel composite products, integrating technologies, and creating products from low-to-high end applications are the main areas of research interest. One example of synergistic activity is developing natural fiber composite products using thermal and chemical modifications to enhance their durability, interfacial interaction, and dimensional stability. Others include investigating the use of natural fiber composites for applications, designing and engineering bio-composites, and conducting research that values and emphasizes economic feasibility.

EDUCATIONS

2018 **Ph.D. -** Swinburne University of Technology Campus, (Hawthorn/Sarawak)
Dissertation: Development and Characterisation of Acacia Wood Fibre Reinforced Polymer Blend Bio-Composites

2016 **M.Eng. (by Research) -** Swinburne University of Technology Sarawak
Dissertation: Investigation of Acoustical and Mechanical Properties of Epoxy Based Natural Fibre Composites

2014 **B.Eng. (Mechanical Engineering) -** Swinburne University of Technology Sarawak
Advanced Final Year Project: Noise Control Strategies Using Composite Porous Materials – Simulations and Experiments Using Two-Microphone Transfer Function Impedance Tube Method
Final Year Project: Noise Control Strategies Using Composite Porous Materials – Simulations and Experimental Validations on Plate/Cavity Systems

PROFESSIONAL APPOINTMENTS

2022 – Present Postdoctoral Research Associate
2019 – 2021 Research Fellow
2014 – 2018 Higher Degree Researcher
2012 – 2012 Trainee Piping/Mechanical Engineer

PROFESSIONAL BODIES

Professional Technologist – Registered Number: PT19070052
Manufacturing and Industrial Technology (ME) - Malaysia Board of Technologists (MBOT)
Graduate Technologist – Registered Number: GT18100315
Manufacturing and Industrial Technology (ME) - Malaysia Board of Technologists (MBOT)
Lifetime Member – *Registered Number: LM202200006*
Manufacturing and Industrial Technology (ME) – Association of Professional Technicians and Technologists (APTT)

Graduate Engineering – Registered Number: GE95447A
Mechanical Engineering (ME) – Board of Engineers Malaysia (BEM)

MENTEES/MENTORED IN LAST TWO YEARS

PhD Students: Mohammad Mezbah Ul Hoque (WSU), Vyasgowtham Prabhakar (WSU), Perry Law Nyuk Khui (UNIMAS), Anthonette Anak James (UNIMAS), Amelia Chai Pei Sze (SUTS)
Master's Students: Rajan Adhikari (WSU), Modupe Akinnuoye (WSU), Mohd Elfy Mersal (SUTS)
Undergraduate Students: Dominica Gachet (WSU), Mark Voronenko (WSU), Isaac Zaid Hernandez (WSU), James Shearer (WSU), Adam Kawessi Mugenyi (WSU), Jacob Finerty (WSU), Russell James Devries (WSU)

EDITORIAL ACTIVITIES

Reviewer for several journals, including Polymer Bulletin, Cellulose, Journal of Applied Polymer Science, Journal of Vinyl and Additive Technology, Scientific Reports, SN Applied Science, Journal of Visualized Experiments, Polymer Testing, Heliyon, and Materials Today Proceedings.

PRESENTATIONS, AWARDS, AND HONORS

- Finalist for Swinburne's 2022 Alumni Impact Awards for the Innovative Planet Impact Award.
- Top Downloaded Article 2019-2020 - The paper has been recognized as a top 10 most downloaded papers in the Journal of Vinyl and Additive Technology by Wiley Publishing Company
- Top Downloaded Article 2018-2019 - The paper has been recognized as a top 10% most downloaded paper in the Journal of Vinyl and Additive Technology by Wiley Publishing Company
- Top Downloaded Article 2017-2018 - The paper has been recognized as a top 20 most read papers in the Journal of Vinyl and Additive Technology by Wiley Publishing Company
- Innovation Technology Expo (InTEX2018) 17th -18th July 2018 Pullman Hotel and UNIMAS, Sarawak, Malaysia– Gold, Silver and Bronze Medalist
- Innovation Technology Expo (InTEX2017) 17th -18th May 2017 DeTAR PUTRA UNIMAS, Sarawak, Malaysia– Gold and Bronze Medalist

SELECTED PUBLICATIONS RELATED TO THE PROJECT IN THE LAST TWO YEARS

Books:

Rahman, M.R., Chin, M.Y., and **Bakri, M.K.B.** (2022) Waste Materials in Advanced Sustainable Concrete – Reuse, Recovery, and Recycle. Chapter 1 -10, Springer, Cham, pp. 1-186.

Rahman, M.R., and **Bakri, M.K.B.** (2022) Recycled Plastic Biocomposites. Chapter 1 -14, Woodhead Publishing, Elsevier, Sawston, pp. 1-330

Journals:

Khui, P.L.N., Rahman, M.R., Abdul Halim Yun, H.B., Huda, D., Hamdan, S., **Bakri, M.K.B.**, Matin, M.M., Kuok, K.K., Chin, M.Y., Al-Bogami, A.S., Alamry, K.A., and Rahman, M.M. (2022) Characterization and Optimization of Organoclay-Poly(Melamine-Co-Formaldehyde)-Methylated Solution Impregnated Pulai (Alstonia spp.) Wood Using Response Surface Methodology. BioResources 17(2), 2780-2809. DOI: 10.15376/biores.17.2.2780-2809

Kamran, M.J., Jayamani, E., Soon, K.H., Yat, C.W., Rahman, M.R., Al-Bogami, A.S., Huda, D., **Bakri, M.K.B.,** and Rahman, M.M. (2022) Characterization and Comparative Study on Chemically Treated Luffa Fiber as Reinforcement for Polylactic Acid Bio-composites. BioResources 17(2), 2576-2597. DOI: 10.15376/biores.17.2.2576-2597.

Taib, N.A.A.B., Rahman, M.R., Huda, D., Kuok, K.K., Handan, S. **Bakri, M.K.B.,** Julaihi, M.R.M.B., and Khan, A. (2022) Polymer Bulletin 1(1), 1-35. DOI: 10.1007/s00289-022-04160-y

Chin, M.Y., **Bakri, M.K.B.,** Rahman, M.R., Kuok, K.K., Khui, PLN., and Huda, D. (2022) Effect of Chemical Treatment on Silicon Manganese: Its Morphological, Elemental and Spectral Properties and Its Usage in Concrete. Silicon 1(1), 1-17. DOI: 10.1007/s12633-021-01569-4

Chin, M.Y., Rahman, M.R., Kuok, K.K., Chiew, W.Y., and **Bakri, M.K.B.** (2021) Characterization and Impact of Curing Duration on the Compressive Strength of Coconut Shell Coarse Aggregate in Concrete. BioResources 16(3), 6057-6073. DOI: 10.15376/biores.16.3.6057-6073.

Hari Prashant, P.V.S., Jayamani, E., Soon, K.H., Rahman, M.R**.,** and **Bakri, M.K.B.** (2021) Characterization Study of Flax/Strontium Titanate/Polypropylene Composite for Low-K Dielectric Applications. Journal of Applied Polymer Science 138(24), 50577. DOI: 10.1002/app.50577

Khui, P.L.N., Rahman, M.R., and **Bakri, M.K.B.** (2021) A Review on the Extraction of Cellulose and Nanocellulose as a Filler Through Solid Waste Management. Journal of Thermoplastic Composite Materials. 1(1), 1-22. DOI: 10.1177/08927057211020800

Hari Prashanth, P.V.S., Jayamani, E., Soon, K.H., Yat, C.W., Rahman, M.R., and **Bakri, M.K.B.** (2021) Interfacial Polarization Effects on Dielectric Properties in Flax Reinforced Polypropylene/Strontium Titanate Composites. Materials Chemistry and Physics, 265(1), 124489. DOI: 10.1016/j.matchemphys.2021.124489

Mohd Khairulzaim, A.A.B., Rahman, M.R., Roslan, L., **Bakri, M.K.B.**, Khan, A., and Matin, M.M. (2021) Analysis of Char Prepared by Pyrolysis of Dabai (Canarium odontophyllum) Nutshells as a Potential Precursor of Biocarbon Used for Wastewater Treatment. BioResources 6(3), 5036-5046. DOI: 10.15376/biores.16.3.5036-5046

Khui, P.L.N., Rahman, M.R., Kuok, K.K., **Bakri, M.K.B.**, Adamu, M., Tazeddinova, D., Kazhmukanbetkyzy, Z.A., and Torebek, B. (2021) Small-size Jatropha Seed Biochar Extracted from Microwave Pyrolysis: Optimization of Its Biocomposites Mechanical Properties by Mixture Design. BIoResources 16(3), 4716-4730. DOI: 10.15376/biores.16.3.4176-4730

Rahman, M.R., Adamu, M., Hamdan, S., **Bakri, M.K.B.**, Md. Yusof, F.A.B., and Khan. A. (2021) Optimization and Characterization of Acrylonitrile/MAPE/Nano-clay Bamboo Nanocomposites by Response Surface Methodology. Polymer Bulletin 1(1), 1-29. DOI: 10.1007/s00289-021-03628-7

Khui, P.L.N., Rahman, M.R., Ahmed, A.A., Kuok, K.K., **Bakri, M.K.B.**, Tazeddinova, D., Kazhmukanbetkyzy, Z.A., and Torebek, B.B. (2021) Morphological and Thermal Properties of Composites Prepared with Poly (lactic acid), Poly (ethylene-alt-maleic anhydride), and Biochar from Microwave-pyrolyzed Jatropha Seeds. BioResources 16(2), 3171-3185. DOI: 10.15376/biores.16.2.3171-3185

Adamu, M., Rahman, M.R., **Bakri, M.K.B.**, Md Yusof, F.A.B., and Khan, A. (2021) Characterization and Optimization of Mechanical Properties of Bamboo/Nanoclay/Polyvinyl Alcohol/Styrene Nanocomposites using Response Surface Methodology. Journal of Vinyl and Additive Technology 27(1), 147-160. DOI: 10.1002/vnl.21792