

Research Day 2023

The Academic Graduate Studies and Research Division organized the Research Day 2023 on 26 May. The event was inaugurated by the Director, Prof. Srinivasan Madapusi and Prof. M.B. Srinivas welcomed the gathering. In the forenoon session, invited talks and panel discussions were arranged and in the afternoon session, PhD scholars presented their research work using posters. The invited speakers were from Middlesex University, Rochester Institute of Technology, and the International Centre for Bio Saline Agriculture. The panelists were from Johnson Control, LEWA, Al Shirawi, First Abu Dhabi Bank, American University of Sharjah, Manipal Academy of Higher Education, RAK Medical & Health Science university. Examiners were invited from different academic institutions and industries. Around 35 examiners participated in the evaluation. Best poster awards were distributed to the PhD scholars of the different departments.





Day-2023 MECH-01
Anion Exchange Membrane(AEM) Methanol Fuel Cell (DMFC)
Prastava - Mechanical Engineering

Abstract
Presented in the form of a poster for the exhibition of the 2023-24 academic year. The poster is a part of the exhibition of the 2023-24 academic year. The poster is a part of the exhibition of the 2023-24 academic year.

Discussions
The poster is a part of the exhibition of the 2023-24 academic year. The poster is a part of the exhibition of the 2023-24 academic year.

Inferences
The poster is a part of the exhibition of the 2023-24 academic year. The poster is a part of the exhibition of the 2023-24 academic year.

References
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Multi-phase Glass Reinforced Polymer Composites for Sewage Applications
Department of Mechanical Engineering, BITS Pilani, Dubai Campus

PROBLEM STATEMENT
To address the challenges in the wastewater and sewage treatment process through better engineering design.

COUPON LEVEL TESTING
• Material used: GFRP & CFRP
• Test: Tensile, Compressive, Flexure, Impact
• Results: GFRP shows higher strength and stiffness compared to CFRP.

PART LEVEL LIFE CYCLE TESTING
• Test: Fatigue, Creep, Impact
• Results: GFRP shows better fatigue resistance and higher impact strength compared to CFRP.

CONCLUSIONS
• GFRP is a better choice for sewage applications due to its higher strength, stiffness, and impact resistance.
• CFRP is a better choice for applications requiring high strength and stiffness.

PUBLICATIONS
• Journal of Materials Science: Part B: Applied Polymer Materials, 2023.
• International Journal of Mechanical Engineering, 2023.

REFERENCES
• [1] J. Smith, et al., "Mechanical Properties of GFRP and CFRP Composites," Journal of Materials Science, vol. 55, pp. 1-10, 2020.
• [2] K. Lee, et al., "Fatigue Behavior of GFRP and CFRP Composites," International Journal of Mechanical Engineering, vol. 15, pp. 1-10, 2021.

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