



A DAILY NEWSLETTER

IGNITE 2022



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TECHNOLOGY TRANSFER PROGRAMME



A 4 day Technology Transfer Programme in association with Texas Instruments for the school students has reached the 2nd day. 19 teams from various schools have participated in the **School Project Contest**. The day came to an end with a Prize Distribution Ceremony and the prizes were distributed by the Principal Dr. Srinivasan Alavandar to the contestants.

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PAPER PUBLICATION

Mechanical properties of waste silk fibre reinforced PLA bio composites manufactured through hand layup methodV.Mohanavel^{1*}, T Sathish², M.Ravichandran³, K.Arul⁴, Ram Subbiah⁵¹Centre for Materials Engineering and Regenerative Medicine, Bharath Institute of Higher Education and Research, Chennai - 600073, Tamilnadu, India.²Department of Mechanical Engineering, Saveetha School of Engineering, SIMATS, Chennai - 602 105, Tamil Nadu, India.³Department of Mechanical Engineering, K.Ramakrishnan College of Engineering, Trichy-621112, Tamilnadu, India.⁴Department of Mechanical Engineering, Agni College of Technology, Chennai - 603130, Tamilnadu, India.⁵Department of Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana 500090

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Abstract: In recent years, biodegradable and eco-friendly composites have gained popularity. Using the hot moulding technique, biodegradable polylactic acid (PLA) biocomposites reinforced with waste silk fibre were fabricated in this paper. They also underwent a variety of mechanical tests like tensile strength and modulus. While not surface-treated, the waste silk fibre reinforced PLA matrix bio composites mechanical properties. The fibre content of 30 wt per cent is optimal for achieving superior properties. Owing to the reinforcing effect of silk fibres, the quasi-static mechanical properties of waste silk fibre/PLA bio composites were enhanced.

Keywords: Mechanical behaviour, waste silk fibre, Tensile strength, UTM, Hand layup process.

1. Introduction

This field of materials science has become particularly active and promising in creating eco-friendly and renewable composites. These polymers could be used in many areas, such as the home as well as the medical industry and other industries [1-3]. Although plant fibres have been successfully synthesised and applied to furniture, automobile fittings, and inshore floors, there have been relatively few studies on bio composites reinforced with natural animal fibres such as silk, wool or hair [4-14].

Silk fibres have superior crystallinity, toughness, and tensile strength to plant-based natural fibres [15]. A lot of effort has been put into both woven and nonwoven silk fibre reinforced plastics. These silk fibre reinforced plastics had a greater range of mechanical properties than flax fibre reinforced epoxy composites [16]. Flexural and tensile moduli are increased by 2 percentage points and 27 percentage points when comparing pure Poly Lactic Acid to 5 weight per cent silk [17]. Poly Butylene Succinate composites were investigated, and silk fibre loading was examined to see its effect on the material's mechanical properties. As well as having superior mechanical properties and excellent biocompatibility, animal fibre can be easily customised and tailored to meet specific needs and

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Dr. Arul Kulandaivel, ASP, Department of Mechanical Engineering published a research article on **Mechanical Properties of Waste Silk Fibre Reinforced PLA Bio Composites Manufactured through hand layup Method** in IOP publications.

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ALUMNI INTERACTION



Dr S. Geerthik, Head, Dept. of IT bestowed the Letter of Recommendation (LOR) to a former alumna R. Gayathri (2016-2020 batch) to join duty in **Shopyfy software's** in Canada.

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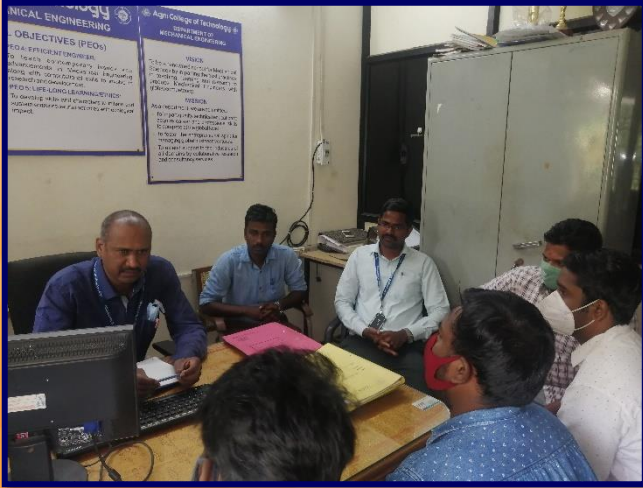


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ALUMNI INTERACTION



Mr. Robin Jebakumar, Mr. Udhayan, Mr. Naresh and Mr. Rakesh, Alumni of the Department of Mechanical Engineering (2016-2020) had a productive discussion with the Head of the Department Dr. L. Ranganathan on 3rd February 2022. The students expressed their gratitude for training them in various modelling software by **Harita Techserv** which has helped them to land in **M/s Skill Lync**.

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ALUMNI MEET



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We welcome our dear Alumni
for
The ALUMNI MEET
Virtual Connect

Alumni Event Coordinators
Dr. J. P. Josh Kumar
Dr. S. K. Narendranathan
Mrs. D. Maheswari

Principal
Dr. Srinivasan Alavandar

Department	Date
1. Computer Science Engineering 2. Information Technology	07.02.2022, Monday @ 6PM to 7PM
1. Electronics and Communication Engineering 2. Electrical and Electronics Engineering 3. Civil Engineering	08.02.2022, Tuesday @ 6PM to 7PM
1. Biomedical Engineering 2. Chemical Engineering 3. MBA & MCA	09.02.2022, Wednesday @ 6PM to 7PM
1. Mechanical Engineering 2. Mechanical and Automation Engineering 3. Mechatronics Engineering	10.02.2022, Thursday @ 6PM to 7PM

Please use the QR code for registration



Meeting Platform:


Agni College of Technology has taken a step forward to connect the alumni of the college in this global scenario through **Alumni Virtual Connect** from 7th February 2022 to 10th February 2022. It is an initiation to **Reconnect, Recharge, Reestablish.**

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FACULTY PARTICIPATION



Dr. Ishwarya M. V, Department of CSE has successfully completed a five day Faculty Development Programme sponsored by ISTE and CSI on the title **BIG DATA ANALYSIS and SECURITY with BLOCK CHAIN- THE FUTURE.**

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