

Editorial Corner

- 543 **Trends and Developments in Natural Fiber Composites**
Madhu Puttegowda, Harikrishnan Pulikkalparambil and Sanjay Mavinkere Rangappa

Review Articles

- 553 **A Review on the Philosophies for the Advancement of Polymer-based Composites: Past, Present and Future Perspective**
Isiaka Oluwole Oladele, Taiwo Fisayo Omotosho, Gabriel Seun Ogunwande and Felix Adebayo Owa
- 580 **Cationic Nanocellulose as Promising Candidate for Filtration Material of COVID-19: A Perspective**
Mohd Nor Faiz Norrahim, Noor Azilah Mohd Kasim, Victor Feizal Knight, Keat Khim Ong, Siti Aminah Mohd Noor, Siti Hasnawati Jamal, Noor Aisyah Ahmad Shah, Norhana Abdul Halim, Rushdan Ahmad Ilyas and Wan Md Zin Wan Yunus
- 588 **Chemical Pretreatment of Lignocellulosic Biomass for the Production of Bioproducts: An Overview**
Mohd Nor Faiz Norrahim, Rushdan Ahmad Ilyas, Norizan Mohd Nurazzi, Mohd Saiful Asmal Rani, Mahamud Siti Nur Atikah and Siti Shazra Shazleen
- 606 **Desirability of Tribo-performance of Natural Based Thermoset and Thermoplastic Composites: A Concise Review**
Aravind Dhandapani, Senthilkumar Krishnasamy, Thitinun Ungtrakul, Senthil Muthu Kumar Thiagamani, Rajini Nagarajan, Chandrasekar Muthukumar and Ganesan Chinnachamy
- 614 **Dynamic Mechanical Performance of Natural Fiber Reinforced Composites: A Brief Review**
Battula Durga Siva Deeraj, Kuruvilla Joseph, Jitha Santhakumari Jayan and Appukuttan Saritha
- 624 **Spanish Broom Fibres Properties and Extraction for Application in Composites: A Review**
Carlo Santulli and Glenda Giampaoli
- 632 **The Influence of Fiber Processing and Alkaline Treatment on the Properties of Natural Fiber-reinforced Composites: A Review**
Keagisitswe Setswalo, Namoshe Molaletsa, Oluseyi Philip Oladijo, Esther Titilayo Akinlabi, Sanjay Mavinkere Rangappa and Suchart Siengchin

Research Articles

- 651 **Effects of Aging and Infill Pattern on Mechanical Properties of Hemp Reinforced PLA Composite Produced by Fused Filament Fabrication (FFF)**
Alperen Dogru, Ayberk Sozen, Gokdeniz Nesar and M. Ozgur Seydibeyoglu
- 661 **Fabrication and Experimental Testing of Hybrid Composite Material Having Biodegradable Bagasse Fiber in a Modified Epoxy Resin: Evaluation of Mechanical and Morphological Behavior**
Vaishally Dogra, Chandra Kishore, Akarsh Verma, Amit Kumar Rana and Amit Gaur

↩ See Inside Cover



“Trends and Developments in Natural Fiber Composites”



Schedule

no. 1 January–March
no. 3 July–September

no. 2 April–June
no. 4 October–December

Editorial Policy

Paper, comprising review and report of original scientific research, will be judged for publication on the basis of evaluation by independent reviewers. Such reports and articles include those containing substantial supported theories, innovative work, substantial experimental results, useful and constructive discussion, and review articles standardized to regional or international acceptance. Each volume will comprise four issues. In addition, special issue containing the proceedings of conferences may be produced. These will be designated as supplements to the appropriate volume and number. An electronic journal is also provided on the website (<http://www.asep.kmutnb.ac.th>). The editors reserve the right to require revision of the submitted manuscript as a condition for final acceptance.

The university and the editorial board claim no responsibility for the contents or views expressed by the authors of individual articles. Copying allowed freely provided acknowledgement is made thereof. All articles submitted for publication will be assessed by a group of distinguished reviewers.

Focus and Scope

Applied Science and Engineering Progress (ISSN: 2672-9156, E-ISSN: 2673-0421) is an international, double-blind peer-reviewed by at least two independent reviewers, open access scientific journal, free of charge, published by King Mongkut's University of Technology North Bangkok (KMUTNB) since 2008. Applied Science and Engineering Progress published original research articles, reviews, and editorial corner in areas of applied science and engineering. The journal also publishes high quality and peer-reviewed papers presented at conference hosted/co-hosted by KMUTNB to expand the research connection between scientists and engineers. Applied Science and Engineering Progress also aims to introduce research progress of applied science and achievements of engineering development to the world community by demonstrating the significance of research investigations and demonstrations. Accepted manuscript to Applied Science and Engineering Progress will be published every quarter in PDF formats (March, June, September, and December).

Applied Science and Engineering Progress consists of two major sections in Applied Science and Engineering field:

Applied Science - This section contains topics in the multidisciplinary domain of applied science and technology on solving technical problems and developing the application of academic research. The focus of this section target to disseminate the progress of the analysis of problem, finding solution and synthesis of knowledge in the fields such as bioprocess technology, chemistry, information technology, and other topics related to applied science.

Engineering - This section contains topics in the combination of engineering, invention and innovation and focuses on solving technical problem. The targets of this section includes research works in applications of engineering and technology such as electrical and electronics, industrial production, mechanical engineering, and other topics related to engineering.

Indexed by SCOPUS, Thai-Journal Citation Index Centre (TCI), ASEAN Citation Index (ACI), CrossRef, Google Scholar and SCITE

Website for Submissions: <http://www.ijast.kmutnb.ac.th>

Contact: asep@op.kmutnb.ac.th

Copyright © 2021 by King Mongkut's University of Technology North Bangkok. All rights reserved.

No part of this publication may be reproduced stored or transmitted in any material form or by any methods including electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher, except in accordance with the provisions of the Copyright Design and Patents Act 1988.

Contents

Research Articles (Continued)

- 668 **Investigation of the Sound Absorption and Transmission Loss Performances of Green Homogenous and Hybrid Luffa and Jute Fiber Samples**
Ahmet C. Ozcan, Kenan Y. Sanliturk, Garip Genc and Hasan Koruk
- 680 **Mechanical, Absorption and Swelling Properties of Vinyl Ester based Natural Fibre Hybrid Composites**
Nadeem Ahmed Nasimudeen, Sharwine Karounamourthy, Joshua Selvarathinam, Senthil Muthu Kumar Thiagamani, Harikrishnan Pulikkalparambil, Senthilkumar Krishnasamy and Chandrasekar Muthukumar
- 689 **Natural Fiber-based Green Composites: Processing, Properties and Biomedical Applications**
Md Enamul Hoque, Asif Mahmud Rayhan and Samira Islam Shaily
- 719 **Statistical Study of the Influence of Fiber Content, Fiber Length and Critical Length in the Mechanical Behavior of Polymeric Composites Reinforced with Carica Papaya Fibers (CPFs)**
Caroliny Santos, Thiago Santos, Katia Moreira, Marcos Aquino and Rubens Fonseca Lucas Zillio
- 727 **Thermal Stability and Tribological Behaviors of Tri-fillers Reinforced Epoxy Hybrid Composites**
Tottyepalayam Palanisamy Sathishkumar, Palanisamy Navaneethakrishnan and Ponnuswamy Maheskumar