Applied Science and Engineering Progress

Vol. 12, No. 4, October-December 2019

Contents

Editorial Corner

223 Hybrid Composites: A Versatile Materials for Future Mohammad Jawaid and Suchart Siengchin

Review Articles

Microwave Sensors Based on Coplanar Waveguide Loaded with Split Ring Resonators:

A Review
Supakorn Harnsoongnoen

Research Articles

- A Comparative Study of Characteristic Finite Element and Characteristic Finite Volume Methods for Convection-Diffusion-Reaction Problems on Triangular Grids
 Sutthisak Phongthanapanich and Robert Eymard
- 243 Adsorption Soluble Cutting Fluid Emulsion by Modified Chitosan with SLES
 Natthaya Puangpun, Intuon Suwimon, Kowit Piyamongkala and Von Louie R. Manguiam
- 253 Characterization of Diluted-acid Pretreatment of Water Hyacinth
 Auangfa Boontum, Jirapa Phetsom, Wawat Rodiahwati, Kanyarat Kitsubthawee and
 Teerachai Kuntothom
- **264** Corn Price Modeling and Forecasting Using Box-Jenkins Model Paibool Kitworawut and Vichai Rungreunganun
- 277 Fire-retardant Paper Based on Montmorillonite and Oil Palm Trunk Fibres

 Saowapa Chotisuwan, Kreepon Wannarit, Phetcharapon Kaewna, Sareena Kardae,
 Yupadee Chaisuksan and Jareerat Roumcharoen
- 286 Permanent Magnet Synchronous Motor Dynamic Modeling with State Observer-based Parameter Estimation for AC Servomotor Drive Application

 Songklod Sriprang, Babak Nahid-Mobarakeh, Noureddine Takorabet, Serge Pierfederici, Nicu Bizon, Poom Kuman and Phatiphat Thounthong
- Single Layer and Multilayers of Ru/Al₂O₃ Using Washcoating Method on Stainless Steel Substrate for Fischer Tropsch Synthesis in Microchannel Reactor

 Apichaya Theampetch, Phavanee Narataruksa, Chaiwat Prapainainar and Thana Sornchanni

Academic Enhancement Department (AED)
King Mongkut's University of Technology North Bangkok (KMUTNB)
1518 Pracharat 1 Road, Wongsawang, Bangsue, Bangkok 10800, Thailand Tel. (66) 2555-2238-40, E-mail: asep@op.kmutnb.ac.th
http://www.asep.kmutnb.ac.th

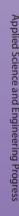


Service of the servic

Applied Science and Engineering Progress

Vol. 12, No. 4, October-December 2019

ISSN: 2672-9156





Paper Citation is as Followed: Applied Science and Engineering Progress

ISSN: 2672-9156

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

Website for Submissions: http://www.asep.kmutnb.ac.th

Contact: asep@op.kmutnb.ac.th

Copyright © 2019 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.

1			_