

10th International Conference on Mechanical and Manufacturing Engineering (ICME2019)

IOP Conference Series: Materials Science and Engineering
Volume 824

Ayer Keroh, Malaysia
29 - 30 August 2019

Editors:

**Zaleha Binti Mohamad
Saliza Azlina Binti Osman
Kamarul Azhan Bin Kamaruddin**

ISBN: 978-1-7138-2677-4
ISSN: 1757-8981

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 3.0 International Licence.
Licence details: <http://creativecommons.org/licenses/by/3.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2021)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

INFLUENCES OF STARCH

INFLUENCES OF STARCH ON CERAMIC-FOAM FABRICATION: A SHORT REVIEW	1
<i>N. H Yatim Abdul Abbas, H. A. Rahman</i>	

POTENTIAL ENERGY

POTENTIAL ENERGY SAVING BY ACMV TEMPERATURE SETTING IN UNIVERSITY BUILDING.....	13
<i>Nurzhatul Aziemah Abdul Omar, Noramin Apandi, Asma'I Fayyadh Abd Samad, Nurfatihah Rahim, Ali Abdul Qader Mustafa, Saba Arif, Zamri Noranai</i>	

PERFORMANCE OPTIMIZATION

SINGLE PARAMETER ENGINE ANALYSIS AND PERFORMANCE OPTIMIZATION OF A MEDIUM DUTY GASOLINE ENGINE.....	18
<i>Mohd Faisal Hushim, Zamri Noranai, Daniel Lau Yan How, Zainul Ameerul Ikhsan Zainul Abidin, Mohd Azahari Razali, Azwan Sapit, Akmal Nizam Mohamed</i>	

STUDY ON BEHAVIOR OF WATER PUM

STUDY ON BEHAVIOR OF WATER TREATMENT PUMP BEFORE AND AFTER MODIFICATION USING FINITE ELEMENT MODAL ANALYSIS	28
<i>Mohamed Firdous Bin Fasal Mohamed, Nor Azali Bin Azmir</i>	

STENT EXPANSION

PRELIMINARY OF FINITE ELEMENT ANALYSIS (FEA) INVESTIGATION ON THE STENT EXPANSION	37
<i>Zulfaqih Lazim, Al Emran Ismail, Ishkrizat Taib</i>	

MECHANICAL PROPERTIES

EFFECT OF MECHANICAL PROPERTIES UNDER TEMPERATURE INFLUENCE AND SUCROSE COMPOSITION ON COCKLESHELL STRUCTURE.....	47
<i>Ranjhini Anpalagan, Kamarul-Azhar Kamarudin, Mohamed Nasrul Mohamed Hatta, Rosniza Hussin, Zaleha Mohamad</i>	

HYDROSTATIC WEIGHING SYSTEM

VERIFICATION OF THE HYDROSTATIC WEIGHING SYSTEM WITH EXISTING GOLD PURITY INSTRUMENTS.....	54
<i>Fazrul Mohd Nor, Abd Rahman Tamuri, Abd Khamim Ismail, A. A. M. Mazuki</i>	

ULNA IMPLANT

DEVELOPMENT AND CHARACTERIZATION OF INJECTION MOULDING MOULD FOR ULNA IMPLANT	63
<i>N. H. Kamarudin, M. H. I. Ibrahim, S. Mahzan@mohd Zin, M. H. Othman, A. M. Amin</i>	

NOVEL DEHUMIDIFIER

INVESTIGATION ON THE PERFORMANCE OF A NOVEL DEHUMIDIFIER FOR A COMBINED SOLAR CHIMNEY AND LIQUID DESICCANT PLANT.....	72
<i>C Y Ang, A J Alimin, S K Mahal</i>	

SWCNTS-KEROSENE

PRELIMINARY SWCNTS-KEROSENE ON CARREAU MHD FLOW OVER A WALL WITH DISTINCT THICKNESS	81
<i>Jaafar Abdul Abbas Abbood Al-Nasrawi, Rozaini Bin Roslan, Owoyemi Abiodun Ezekiel, Radiah Mohamad</i>	

PRELIMINARY STUDIES ON PVT

PRELIMINARY STUDIES ON DESIGN OF PHOTOVOLTAIC THERMAL (PVT) SOLAR COLLECTOR FOR ROOFING SYSTEM APPLICATION.	92
<i>Zariq Imran Abdul Manap, Hanani Abd Wahab, Ong Pauline, Al-Emran Ismail, Maznan Ismon, Zaleha Mohamad</i>	

UHF RFID NETWORK

MULTI OBJECTIVE OPTIMIZATION OF INDOOR UHF RFID NETWORK BASED ON GRADIENT - CUCKOO SEARCH.....	107
<i>Nihad Hasan Talib, Khalid Bin Hasnan, Azli Binnawawi, Adel Elewe, Haslina Binti Abdullah</i>	

MATHEMATICAL MODEL

VERIFICATION OF MATHEMATICAL MODEL FOR UPPER LIMB SPASTICITY WITH CLINICAL DATA	118
<i>J Yee, C Y Low, P Ong, W S Soh, F A Hanapiah, N A Che Zakaria, S Von Enzberg, L Asmar, R Dumitrescu</i>	

LEAF SHEATH (ALS)

PRODUCTION OF DISPOSABLE TAKEAWAY FOOD CONTAINER FROM ARECA LEAF SHEATH (ALS) AS SUSTAINABLE PACKAGING MATERIAL	127
<i>Oi Ka Jong, Tze Mi Yong, Muharam Rafidi Jaafar</i>	

TREATED AMORPHOUS SILICA

PHYSICAL PROPERTIES AND HARDNESS OF TREATED AMORPHOUS SILICA AS REINFORCEMENT OF AA7075 RECYCLED ALUMINUM CHIP.....	133
<i>Nurul Farahin Mohd Joharudin, Noradila Abdul Latif, Mohammad Sukri Mustapa, Nur Azam Badarulzaman, Muhammad Faisal Mahmud</i>	

POLYURETHANE (PU)

OPTIMIZATION OF ACOUSTICAL PROPERTIES POLYURETHANE (PU) WOOD FIBRES FOAM COMPOSITES.....	138
<i>Hanani Abdul Wahab, Anika Zafiah M. Rus, Ahmad Tajuddin Moen, Khairul Nizam Ngadimon, Fazimah Mat Noor</i>	

HOT EXTRUDED AA6061

DAMAGE INITIATION AND EVOLUTION ANALYSIS OF HOT EXTRUDED RECYCLED ALUMINIUM ALLOYS (AA6061)	147
<i>C. S. Ho, M. K. Mohd Nor, N. Ma'At, K. Y. Alaric Sim, M. N. Ibrahim, S. Jamian, M. A. Lajis, N. K. Yusuf</i>	

TOOTHBRUSHING SIMULATOR

DESCRIPTIVE STATISTICS ANALYSIS OF THE VARIABLE IN THE DATA OF TOOTHBRUSHING SIMULATOR SYSTEM MODELLING.....	155
<i>Salihatun Md Salleh, Mohamad Norani Mansor, Hadirah Hassan, Ainul Husna Mohd Yusoff, Badrul Aisham Md Zin, Musli Nizam Yahya, S. T. Wijianto</i>	

CONTINUOUS GRADIENT

CHARACTERIZATION OF CONTINUOUS GRADIENT FUNCTIONALLY GRADED NATURAL FIBER REINFORCED POLYMER COMPOSITES	163
<i>M I H Jamaludin, S Jamian, M K Awang, K A Kamarudin, M K Mohd Nor, A E Ismail</i>	

HEURISTIC

BOTTLENECK-BASED HEURISTIC FOR PERMUTATION FLOWSHOP SCHEDULING	171
<i>N. A. Isa, S. A. Bareduan, A. S. Zainudin</i>	

DYNAMIC WEIGHTED

DYNAMIC WEIGHTED IDLE TIME HEURISTIC FOR FLOWSHOP SCHEDULING	179
<i>A. S. Zainudin, S. A. Bareduan, N. A. Isa</i>	

Author Index