5th International Conference on Nanomaterials and Materials Engineering (ICNME 2017)

IOP Conference Series: Materials Science and Engineering Volume 204

Bali, Indonesia 1 – 3 April 2017

ISBN: 978-1-5108-4095-9

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.

Copyright© (2017) by the Institute of Physics All rights reserved. The material featured in this book is subject to IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2017)

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

Volume 204

5th International Conference on Nanomaterials and Materials Engineering

1-3 April 2017, Bali, Indonesia

Accepted papers received: 18 May 2017

Published online: 25 May 2017

Preface

011001 OPEN ACCESS

5th International Conference on Nanomaterials and Materials Engineering

011002 OPEN ACCESS Committee Members

011003 OPEN ACCESS Peer review statement

Structure and Performance Analysis of Electrical Materials

012001 OPEN ACCESS

Structural and magnetic properties characterization of mechanically alloyed La substituted $Ba_{(1-x)}La_xFe_{12}O_{19}$ (x = 0.07, 0.15 and 0.20)

Kilat Permana Putra and Azwar Manaf.....1

OPEN ACCESS

Effect of pH on ionic liquid mediated synthesis of gold nanoparticle using elaiseguineensis (palm oil) kernel extract

Muhammad Irfan, Tausif Ahmad, Muhammad Moniruzzaman and Bawadi Abdullah.....6

012003

OPEN ACCESS

Electrical and Structural Analysis on the Formation of n-type Junction in Germanium

Umar Abdul Aziz, Nur Nadhirah Mohamad Rashid, Siti Rahmah Aid, Anthony Centeno, Hiroshi Ikenoue and Fang Xie.....12

012004

OPEN ACCESS

Low-Temperature Synthesis of Vertically Align ZnO Layer on ITO Glass: The Role of Seed Layer and Hydrothermal Process

Amalia Sholehah, NurSumiati Achmad, Arbi Dimyati, Yanyan Dwiyanti and Tri Partuti.....17

012005

OPEN ACCESS

The impact of electron beam irradiation on Low density polyethylene and Ethylene vinyl acetate

Maziyar Sabet and Hassan Soleimani....22

012006

OPEN ACCESS

The structural, morphological and magnetic properties of Ag-doped La_{0.8}Ca_{0.2-x}Ag_xMnO₃ synthesized by sol-gel method

F Ruli and B Kurniawan.....28

Advanced Technology of Composites and Nanomaterials

012007

OPEN ACCESS

Numerical Study of Two-Phase Flow in Micro-/Nanobubble Generating Pump

Hilman Syaeful Alam, Bahrudin and Anto Tri Sugiarto.....33

OPEN ACCESS

Production and Application of Olivine Nano-Silica in Concrete

Oesman Mardiana and Haryadi.....37

012009

OPEN ACCESS

Synthesis, Characterization and Visible Light Photocatalytic of Fe₃O₄/CuO/TiO₂/Ag Nanocomposites

Malleo Fauzian, Ardiansyah Taufik and Rosari Saleh....42

012010

OPEN ACCESS

<u>Influence of surface activated carbon nano fibres on mechanical properties of poly ether ketone (PEK)</u>

G Ajeesh, S Bhowmik, V Sivakumar and L Varshney.....47

012011

OPEN ACCESS

<u>Indigenous Indonesian Wild Silkworm Cocoon of Attacus atlas as Biocompatible Film Biomaterial</u>

T G T Nindhia, Z Knejzlik, T Ruml, I W Surata and T S Nindhia.....51

012012

OPEN ACCESS

Synthesis and Physico-Chemical Properties of Zinc Layered Hydroxide-4-Chloro-2-Methylphenoxy Acetic Acid (ZMCPA) Nanocomposite

N M Salleh, SM N Mohsin, S H Sarijo and S A I S M Ghazali.....56

012013

OPEN ACCESS

Synthesis of Superabsorbent Polymer via Inverse Suspension Method: Effect of Carbon Filler

Munirah Ezzah Tuan Zakaria, Saidatul Shima Jamari, Yeong Yi Ling and Suriati Ghazali.....61

OPEN ACCESS

Fabrication of a silica aerogel and examination of its hydrophobic properties via contact angle and 3M water repellency tests

Z. Mazrouei-Sebdani, L. Javazmi, A. Khoddami, F. Shams-Ghahfarokhi and T. Low.....67

012015

OPEN ACCESS

Polypropylene/olive pit & almond shell polymer composites: wear and friction

M Tasdemir.....72

Synthesis and Preparation of Materials: Modeling and Experiments

012016

OPEN ACCESS

Effects of Waste Plastic on the Physical and Rheological Properties of Bitumen

Mohd Ezree Abdullah, Nurul Asyiqin Ahmad, Ramadhansyah Putra Jaya, Norhidayah Abdul Hassan, Haryati Yaacob and Mohd Rosli Hainin.....77

012017

OPEN ACCESS

Modelling and Optimization of Copper Electroplating Adhesion Strength

Suryanto, Farag I Haider, Mohd Hanafi Ani and M H Mahmood.....84

012018

OPEN ACCESS

<u>Characterization of the microfibrillated cellulose from water hyacinth pulp after alkali</u> treatment and wet blending

M Asrofi, H Abral, A Kasim and A Pratoto....89

012019

OPEN ACCESS

Optimization of Temperatures Heating Melt and Annealing Soft Magnetic Alloys

Vladimir Tsepelev and Yuri Starodubtsev.....95

OPEN ACCESS

The effect of screw rotating speed on mass flow rate, temperature, viscosity, mooney scorch time anddie swell of cold feed rubber blending prepared by qsm 200 extruder machine

P Elmiawan, H Saryanto and D Sebayang....101

012021

OPEN ACCESS

The effects of screw rotation speed on viscosity, mooney scorch time and dieswell of hot-feed blending rubber-compound prefared by gs/w 250 extruder machine

A Zohari, H Saryanto and D Sebayang.....106

012022

OPEN ACCESS

The use of natural sand from lampusatu beach, kabupatenmerauke, papua for mixed asphalt concrete

D D M Huwae, L. R. Parera, Alpius and J Tanijaya.....111

012023

OPEN ACCESS

Phase transformation of NiTi alloys during vacuum sintering

Jun Wang and Kuang Hu....116

012024

OPEN ACCESS

Rigid palm oil-based polyurethane foam reinforced with diamine-modified montmorillonite nanoclay

Mohd Haziq Dzulkifli, Mohd Yazid Yahya and Rohah A. Majid.....121

012025

OPEN ACCESS

The Effect of Various Acids on Properties of Microcrystalline Cellulose (MCC) Extracted from Rice Husk (RH)

A S Nur Hanani, A Zuliahani, W I Nawawi, N Razif and A R Rozyanty.....126

012026 OPEN ACCESS

Effect of Copper and Silicon on Al-5%Zn Alloy as a Candidate Low Voltage Sacrificial Anode

Yudha Pratesa, Deni Ferdian and Inez Togina.....131