

2nd International Conference on Materials Engineering and Nano Sciences (ICMENS 2018)

IOP Conference Series: Materials Science and Engineering
Volume 378

Singapore
13 – 15 January 2018

ISBN: 978-1-5108-6585-3
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© (2018) 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. (2018)

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 378

**2nd International Conference on Materials Engineering and Nano Sciences
(ICMENS 2018)**

11–13 January 2018, Hong Kong

Accepted papers received: 15 June 2018

Published online: 3 July 2018

Preface

[2nd International Conference on Materials Engineering and Nano Sciences \(ICMENS 2018\)](#)

[Conference Committees](#)

[Peer review statement](#)

Papers

Nanomaterials and Material Physics

[Temporal double-slit interferences of a quantum fluxon in quantum Josephson nanocircuits](#)

A Iwamoto and N Hatakenaka.....1

[The electrochromic property of MoO₃/WO₃ nanocomposite films](#)

Surachai Chaichana, Lek Sikong, Kalayanee Kooptarnond and Kanadit Chetpattananondh.....7

[Black sesame-derived carbon dots for metal ion and amine vapour sensing](#)

Peerasak Paoprasert, Hataipat Moonmuang, Preeyanuch Supchocksoonthorn, Nichaphat Thongsai and Sumana Kladsomboon.....14

[Ising model with four-spin interaction on honeycomb lattice](#)

Yuming Yang and Baohua Teng.....19

[Synthesis of biocompatible carbon dots from yogurt and gas vapor sensing](#)

S Moonrinta, S Jamnongsong, S Sampattavanich, S Kladsomboon, W Sajomsang and P Paoprasert.....25

Material Mechanics and Solid Mechanics

[Imperfections in carbon nanotubes structure and their impact on the basic mechanical properties](#)

Marino Brčić, Marko Čanađija and Josip Brnić.....30

[Comparison of the mechanical behavior of materials subjected to specific operating conditions](#)

J Brnic, S Krscanski and M Brcic.....35

[Mechanical Properties of Cf/SiC Composites with Ameliorated Interface Employing a New Precursor](#)

Y L Shi and K Jian.....41

[Study on the Compressive Mechanical Properties of HTPB Propellant at Low Temperature](#)

Xiangdong Chen, Xin-long Chang, Youhong Zhang and Lei Zhang.....47

[A Study of Impact Energy on Eggshell Crack](#)

Po-Ting Chou and Jeng-Liang Lin.....52

[Vibration and Mode Shape Analysis of Functionally Graded Nanocomposite Plates Reinforced by Aggregated Carbon Nanotube](#)

Vahid Tahouneh.....59

Alloys and Coatings

[Wear and Corrosion properties of CrSiCN coatings deposited by cathodic arc deposition process](#)

C H Yang, C Y Chen and W Y Ho.....67

[Hybrid Frequency-dependent Hysteresis Model of Magnetostrictive Actuator](#)

Yikun Yang, Bintang Yang and Muqing Niu.....73

[Study on Oxidation Resistance of TiAlN Films Deposited by Magnetron Sputtering](#)

Hongying Huo and Min Zou.....80

[Deformation Characteristics and Texture Development of Biadded Cu-29Zn Alloys](#)

Imam Basori, Irene Angela, David Jendra and Bondan T. Sofyan.....86

Mechanical and Manufacturing Engineering

[Effects of material characteristics and clearance size on dynamics of a slider-crank mechanism with two sliders and revolute clearance joints](#)

Ngoc-Thai Huynh, Shyh-Chour Huang and Thanh-Phong Dao.....95

[Dynamic Characteristics Analysis of Spiral Groove Liquid Lubricated Seal Considering Centrifugal Inertia](#)

W J Yang, M M Hao, Z T Li and H C Cao.....101

[Research on Surface Topography Characteristics of Laser Micro-hole Drilling](#)

H J Ding, X H Li and D Wang.....109

[Research on AC Power Conditioning Control Technology for Ultraprecision Machining of Steel Materials](#)

En-Chih Chang.....114