

International Conference on Building Materials and Materials Engineering (ICBMM 2017)

IOP Conference Series: Materials Science and Engineering
Volume 264

Lyon, France
21 – 23 September 2017

ISBN: 978-1-5108-5310-2
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. (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 264

**2017 International Conference on Building Materials and Materials Engineering
(ICBMM 2017)**

21–23 September 2017, Lyon, France

Accepted papers received: 30 October 2017

Published online: 29 November 2017

Preface

[2017 International Conference on Building Materials and Materials Engineering
\(ICBMM 2017\)](#)

[2017 International Conference on Building Materials and Materials Engineering
\(ICBMM 2017\)](#)

[Peer review statement](#)

Papers

[Study on strength estimation of soil cement used in the embedded pile method by
electrical resistivity measurement](#)

Y Mochida, Y Sakurai, H Indra and A L Karimi.....1

[Mix design and mechanical performance of geopolymer binder for sustainable
construction and building material](#)

Manfredi Saeli, Rui M. Novais, Maria Paula Seabra and João A. Labrincha.....9

[Effect of setting accelerator to the initial strength of mortar with blast furnace slag cement](#)

D Takehisa, N Nakajima, Y Uno and S Date.....17

[Properties of ambient cured blended alkali activated cement concrete](#)

M Talha Junaid.....24

[Architectural membranes on building's functional refurbishment](#)

M Macieira, P Mendonça and J Miranda Guedes.....33

[Assessment on bamboo scrimber as a substitute for timber in building envelope in tropical and humid subtropical climate zones - part 1 hygrothermal properties test](#)

Zujian Huang, Yimin Sun and Florian Musso.....42

[Assessment on bamboo scrimber as a substitute for timber in building envelope in tropical and humid subtropical climate zones - part 2 performance in building envelope](#)

Zujian Huang, Yimin Sun and Florian Musso.....51

[Properties of concrete containing ground palm oil fuel ash as fine aggregate replacement](#)

W A. Saffuan, K Muthusamy, N. A. Mohd Salleh and N. Nordin.....60

[Effects of material properties of HFDFRCC Using recycled fine aggregate on shear strength of RC beam](#)

Yuhei Shiratori and Ken Watanabe.....66

[Verification of chloride adsorption effect of mortar with salt adsorbent](#)

T Hoshina, N Nakajima, H Sudo and S Date.....76

[Effects of curing conditions and addition of fine blast furnace slag powder on the initial performance of concrete using expanding material](#)

Nozomi Nakajima, Kazuki Hirabe, Shin-ichiro Hashimoto and Shigeyuki Date.....82

[Fracture simulation of structural steel at elevated temperature using XFEM technique](#)

Wenyu Cai.....89

[Applications of graphite-enabled phase change material composites to improve thermal performance of cementitious materials](#)

Mingli Li, Zhibin Lin, Lili Wu, Jinhui Wang and Na Gong.....99

[Urban renewal based wind environment at pedestrian level in high-density and high-rise urban areas in Sai Ying Pun, Hong Kong](#)

J W Yao, J Y Zheng, Y Zhao, Y H Shao and F Yuan.....105

[Strength of laser welded joints of polypropylene composites](#)

V Votrubec, P Hisem, L Vinšová and V Lukášová.....113

[Optimization of heat treatment parameters for additive manufacturing and gravity casting AlSi10Mg alloy](#)

L Girelli, M Tocci, L Montesano, M Gelfi and A Pola.....118

[Tool wear of \(Ti, Al\) N-coated polycrystalline cubic boron nitride compact in cutting of hardened steel](#)

Tadahiro Wada and Hiroyuki Hanyu.....126

[The effects of foaming conditions on plasticized polyvinyl chloride foam morphology by using liquid carbon dioxide](#)

N Chuaponpat and S Areerat.....134

[In situ viscoelasticity and in situ thermo-responsiveness in acrylic acid-based soft hydrogels](#)

Saminu M. Magami.....140

[Room temperature sintering of printer silver nanoparticle conductive ink](#)

Dianne C. Corsino and Mary Donnabelle L. Balela.....146

[Probabilistic analysis of the behavior of polymer matrix composite materials reinforced by different types of fibers](#)

N. Harb, B. Bezzazi, S. Mehraz, K. Hamitouche and H. Dilmi.....151