

5th International Conference on Energy Engineering and Smart Materials (ICEESM-2020)

IOP Conference Series: Materials Science and Engineering
Volume 876

Barcelona, Spain
15 - 17 April 2020

ISBN: 978-1-7138-2689-7
ISSN: 1755-8981

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

MATERIAL SYNTHESIS AND PREPARATION

INTRACELLULAR DELIVERY OF NANOPARTICLES FABRICATED FROM MONOCLONAL AND POLYCLONAL ANTIBODIES AGAINST INFLUENZA A AND HEPATITIS B VIRUS ANTIGENS	1
<i>O.V. Morozova, E.R. Pavlova, E.I. Isaeva, A.I. Sokolova, E.A. Obratsova, E.A. Ivleva, D.V. Klinov</i>	

SHELL STRUCTURE OF THE POROUS TINI-FRAMEWORK OBTAINED BY THE SHS METHOD.....	6
<i>S Gunther, E Marchenko, G Baigonakova, Y Yasenchuk</i>	

MECHANICAL AND COMPUTATIONAL MATERIALS

NUMERICAL MODELLING OF PCMS ENCAPSULATED IN SPHERICAL SHELLS USING INVERSE ENTHALPY-TEMPERATURE FUNCTIONS.....	11
<i>O G Pop, C A Iuga, L. Fechete Tutunaru, F. Domnita, M C Balan</i>	

FINITE ELEMENT MODELLING OF BIG TURBO-GENERATOR ROTOR VIBRATIONS USING NEWMARK-BETA INTEGRATION METHOD	16
<i>Tarun Kumar, Rajeev Kumar, S C Jain</i>	

NEW ENERGY MATERIALS AND DESIGN

ANALYSIS OF DIFFERENT MICROCRACKS SHAPES AND THE EFFECT OF EACH SHAPE ON PERFORMANCE OF PV MODULES	21
<i>Mathhar Bdour, Aseel Al-Sadi</i>	

STUDY OF PRINTED POLYMERIC FLEXIBLE ENERGY HARVESTING ELEMENTS – IMPACT OF THE ELECTRODE MATERIALS AND PATTERNS.....	26
<i>M Aleksandrova, R Aepuru, G Dobrikov</i>	

DESIGN AND IMPLEMENTATION OF INTERFACE CIRCUITS INTENDED FOR PRINTED PIEZOELECTRIC MICROPOWER HARVESTERS ON FLEXIBLE SUBSTRATES.....	32
<i>I Pandiev, M Aleksandrova, G Kolev</i>	

FLUID MECHANICS

BIOMECHANICS OF FISH SWIMMING IN A HYDROKINETIC TURBINE WAKE	39
<i>M M Macias, L Lafuente, A C P Brasil Junior</i>	

COMPARISON OF EXPERIMENTAL AND MODEL LIQUID DISTRIBUTION IN LARGE PACKED BED OF RAFLUX RINGS 50-5	44
<i>Tatyana S Petrova, Daniela B Dzhonova-Atanasova, Krum A Semkov</i>	

Author Index