

5th International Conference on Advanced Sciences (ICAS5)

IOP Conference Series: Materials Science and Engineering
Volume 1046

Hurghada, Egypt
10 - 12 November 2019

ISBN: 978-1-7138-3334-5
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

ULTRACOMPACT GAS-SENSOR BASED ON A 2D PHOTONIC CRYSTAL WAVEGUIDE INCORPORATING WITH TAPERED MICROCAVITY	1
<i>A Harhouz, A Hocini, H Tayoub</i>	
INFLUENCE OF NANOSILICA, METAKAOLIN AND POLYPROPYLENE FIBER ON DYNAMIC AND PHYSICOMECHANICAL PROPERTIES OF PORTLAND CEMENT MORTAR.....	9
<i>Ibrahim M El-Kattan, T A Tawfik, K A Metwally, A S Faried, W Zakid</i>	
DESIGN AND ANALYSIS OF NEAR INFRARED HIGH SENSITIVE METAL-INSULATOR- METAL PLASMONIC BIO-SENSOR.....	21
<i>H Ben salah, A Hocini, N Melouki, D Khedrouche</i>	
IMPACT OF USING NANO-HYDROXYAPATITE ON POSTOPERATIVE HYPERSENSITIVITY OF TWO BLEACHING TECHNIQUES – RANDOMIZED CONTROLLED CLINICAL TRIAL	29
<i>H Mohamed, A Fayed, D Elkassas, O Hassanien</i>	
SYNTHESIS, IDENTIFICATION, ANTIBACTERIAL, AND DYEING APPLICATIONS OF COMPLEXES OF HEXADENTATE (N4O2 DONOR) SCHIFF BASE LIGANDS DERIVED FROM CURCUMIN WITH SOME TRANSITION AND NON-TRANSITION METAL CATIONS.....	39
<i>A M Ali, T H Al-Noor</i>	
SYNTHESIS, SPECTROSCOPIC STUDY, BIOLOGICAL ACTIVITY AND DYEING APPLICATION OF CURCUMIN - SCHIFF BASE WITH VARIOUS METAL IONS COMPLEXES	52
<i>A M Ali, T H Al-Noor</i>	
GREEN DATA COLLECTION STRATEGY IN THE SCIENCE DOMAIN FOR ENVIRONMENTAL SUSTAINABILITY	68
<i>Davidson E Egirani, Nabila Shehata</i>	
DIELECTRIC AND DYNAMIC MECHANICAL PROPERTIES OF ROCHELLE SALT / PVA COMPOSITES	75
<i>E O Taha, G M Nasr</i>	
SHEAR BOND STRENGTH OF BIO-ACTIVE CEMENT VERSUS SELF-ADHESIVE RESIN CEMENT WITH ENAMEL AND DENTIN WHEN BONDED TO ZIRCONIA IN WET AND DRY CONDITIONS (IN-VITRO STUDY).....	80
<i>M A Elattar, A H Khalil, J F Younis</i>	
STUDY OF DARK ELECTRICAL PROPERTIES AND PHOTOELECTRIC PERFORMANCE OF ORGANIC/INORGANIC (ZNPC/P-SI) SOLAR CELLS	90
<i>A A El Amin, M M Mahmoud</i>	
SYNTHESIS AND CHARACTERIZATION OF PVA/SPTA PROTON EXCHANGE MEMBRANES FOR FUEL CELL APPLICATIONS.....	98
<i>M M Gomaa, Y S Elsharkawy, M O Abdel-Hamed, E E Abdel-Hady</i>	
EFFECT OF STIRRING TIME ON ZNO NANOPARTICLES PROPERTIES AND MORPHOLOGY	107
<i>M A Moghazy</i>	

MICROSTRUCTURAL CHANGES AND FRACTURE RESISTANCE OF NANO-CRYSTALLINE MONOLITHIC ZIRCONIA RESTORATIONS UPON AGING	115
<i>M H Kamel, H Zaghloul, T Salah, L Ghanem</i>	
OPTICAL PROPERTIES OF ONE-DIMENSIONAL PHOTONIC CRYSTAL AND LIGHT ABSORPTION ENHANCEMENT IN PLANAR A-SI:H SOLAR CELL	125
<i>B Sadoun, S Mouetsi, A Hocini, A Hocini</i>	
DESIGN OF HIGH SENSITIVE GLUCOSE CONCENTRATION SENSOR OF PHOTONIC CRYSTAL CAVITY	133
<i>A Hocini, S Mouetsi, A Hocini, B Saadoun</i>	
DIAGNOSING DIFFERENT TYPES OF SKIN CARCINOMA BASED ON THEIR OPTICAL PROPERTIES: A MONTE-CARLO IMPLEMENTATION	141
<i>Omnia Hamdy, Ibrahim Abdelhalim</i>	
A DFT INVESTIGATION OF ANION-P INTERACTIONS BETWEEN HALOGEN OXYANIONS (XO ₃ ⁻ , X = CL, BR, I) AND AROMATIC P-SYSTEMS (BENZENE AND CORONENE).....	150
<i>S M Elgengehi, Kh E El-Kelany, S El-Taher</i>	
BOND STRENGTH OF HYBRID CERAMICS: THE EFFECT OF NANOTECHNOLOGY.....	162
<i>T Anwar, A Mokhtar, H Zaghloul</i>	
A NOVEL MERGING SOLAR PARABOLIC COLLECTOR WITH THERMOELECTRIC GENERATOR USING GEOTHERMAL ENERGY	175
<i>A E Atta, Nabila Shehata, Hamdy F M Mohamed, Mohamed R. O. Ali</i>	
MONITORING OF ACOUSTIC EMISSION BEHAVIOUR DURING EARLY-AGE CEMENT PASTE HYDRATION	186
<i>M A Shawkey, M A Abdelzaher, H M Mahmoud, M M Rashad</i>	
RECENT ADVANCES AND CHALLENGES IN MANAGEMENT OF UREA WASTEWATER: A MINI REVIEW	193
<i>A Zaher, Nabila Shehata</i>	
CATALYTIC THERMOCHEMICAL CRACKING OF POLYETHYLENE OVER NANOCOMPOSITE BENTONITE CLAY	206
<i>A S Hamouda, P Acharjee, A Abdelrahman, A M Radwan, A H Zaki, A Farghali, H F M Mohamed, A Yadav, A Bhatnagar, A Goel</i>	
ANTIDIABETIC EFFECTS OF CURCUMIN/ZINC OXIDE NANOCOMPOSITE IN STREPTOZOTOCIN-INDUCED DIABETIC RATS	221
<i>S M Abd El-Aziz, M Raslan, M Afify, M D E Abdelmaksoud, K A El-Nesr</i>	
SINGLE AND COMBINED IMPACT OF SILICA FUMES WITH FUNCTIONALIZED MULTI-WALLED CARBON NANOTUBES AND NANO SILICA ON PERFORMANCE OF CEMENT MORTARS COMPOSITES	233
<i>Ibrahim M. El-Kattan, M H Khedr, A A Farghali, M Elsaedy, F N Soliman</i>	
EFFECT OF HYDROTHERMAL TIME AND ACID-WASHING ON THE ANTIBACTERIAL ACTIVITY OF SODIUM TITANATE NANOTUBES.....	252
<i>H Mohamed, A H Zaki, Fatma I Abo El-Ela, S I El-dek</i>	

EFFECT OF LA DOPING ON THE STRUCTURAL AND GAS SENSING PROPERTIES OF PBS THIN FILMS DEPOSITED BY SPRAY PYROLYSIS	262
<i>A Hamdedein, A A Aboud, W M A El Rouby, M D Khan, A A Farghali, M H Khedr, N Revaprasadu</i>	
SYNTHESIS AND CHARACTERIZATION OF NI/NICO ₂ O ₄ MODIFIED ELECTRODE FOR METHANOL ELECTRO-CATALYTIC OXIDATION.....	276
<i>A Hamdedein, W M A El Rouby, M D Khan, M M EL-Deeb, A A Farghali, M H Khedr, N Revaprasadu</i>	
HEALTH RISK ASSESSMENT AND MICRO DETERMINATION OF TRACE ELEMENTS CONTENT IN EGYPTIAN OLIVE OIL USING ICP-OES.....	290
<i>A A Yassin, M A Ghandour, M M Khalil</i>	
EFFECT OF NANOPARTICLES OF FELDSPAR AND HEMATITE USING DIFFERENT LEVELS OF CHEMICAL POTASSIUM FERTILIZER ON YIELD AND PROTEIN PRODUCTION OF WHEAT.....	295
<i>Maha M Abd El-Wahab, Magdy Y Gabriel, Mai Raslan, Ahmed A Farghali</i>	

Author Index