# 4th International Conference on Advanced Materials Science and Technology (ICAMST-2016)

IOP Conference Series: Materials Science and Engineering Volume 202

Malang, Indonesia 27 - 28 September 2016

**Editors:** 

**Markus Diantoro** 

ISBN: 978-1-5108-4176-5

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.

Copyright© (2016) 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 202

The 4th International Conference on Advanced Materials Science and Technology

27-28 September 2016, Universitas Negeri Malang, Indonesia

Accepted papers received: 12 May 2017

Published online: 31 May 2017

## **Preface**

011001 OPEN ACCESS

The 4th International Conference on Advanced Materials Science and Technology

011002 OPEN ACCESS

Organizing Committee of ICAMST 2016

011003 OPEN ACCESS

Maps and Photographs

011004

**OPEN ACCESS** 

Peer review statement

# **Papers**

012001

**OPEN ACCESS** 

Spin-Parity Behavior in the Exchange-Coupled Lanthanoid-Nitroxide Molecular Magnets

T Ishida....1

**OPEN ACCESS** 

Magneto-Structural Relationship on Strong Exchange Interactions between Chelating Nitroxide Radical and Transition-Metal Spins

A Okazawa.....11

012003

**OPEN ACCESS** 

<u>Fabrication of Mesoporous Silica/Alumina Hybrid Membrane Film Nanocomposites</u> using Template Sol-Gel Synthesis of Amphiphilic Triphenylene

H O Lintang, M A Jalani, L Yuliati and M M Salleh....20

012004

**OPEN ACCESS** 

<u>Preparation of Low fouling Polyethersulfone Membranes by Simultaneously Phase</u> <u>Separation and Redox Polymerization</u>

A Roihatin and H Susanto.....29

012005

OPEN ACCESS

Crystallinity and Electrical Conductivity of PANI-Ag/Ni Film: The Role of Ultrasonic and Silver Doped

M Diantoro, I N Fitriana, F Parasmayanti, Nasikhudin, A Taufiq, Sunaryono, N Mufti and H Nur.....35

012006

**OPEN ACCESS** 

The Effect of Thickness of ZnO Thin Films on Hydrophobic Self-Cleaning Properties

N Mufti, D Arista, M Diantoro, A Fuad, A Taufig and Sunaryono....42

012007

**OPEN ACCESS** 

Optimalization of Freezing-Thawing Process in Enhancing Magnetic Properties of Fe<sub>3</sub>O<sub>4</sub>/PAA/PVA Magnetic Hydrogel Composites

Sunaryono, H Hifdziyah, A Taufiq, M Diantoro and N Mufti.....49

**OPEN ACCESS** 

Fabrication of Magnetite Nanoparticles Dispersed in Olive Oil and Their Structural and Magnetic Investigations

A Taufiq, R E Saputro, Sunaryono, N Hidayat, A Hidayat, N Mufti, M Diantoro, A Patriati, Mujamilah, E G R Putra and H Nur.....56

012009

**OPEN ACCESS** 

Magnetically Separable Fe<sub>3</sub>O<sub>4</sub>/SnO<sub>2</sub>/Graphene Adsorbent for Waste Water Removal

V Paramarta, A Taufik and R Saleh.....64

012010

**OPEN ACCESS** 

Synthesis of High-Impact Polystyrene Fibers using Electrospinning

A Zulfi, A Fauzi, D Edikresnha, M M Munir and Khairurrijal.....72

012011

**OPEN ACCESS** 

<u>Preparation of PVA/TiO<sub>2</sub> Composites Nanofibers by using Electrospinning Method for Photocatalytic Degradation</u>

Nasikhudin, E P Ismaya, M Diantoro, A Kusumaatmaja and K Triyana.....80

012012

**OPEN ACCESS** 

Synthesis, Single Crystal Structure, and Magnetic Properties of 3-D Cu(NITpPy)<sub>2</sub>[Cu(CN)<sub>3</sub>].2CH<sub>3</sub>OH.2H<sub>2</sub>O Complexes

I W Dasna, S Golhen, L Ouahab and Subakti.....86

012013

**OPEN ACCESS** 

<u>Preparation of MWCNT-Fe<sub>3</sub>O<sub>4</sub> Nanocomposites from Iron Sand Using Sonochemical</u> Route

R Rahmawati, A Melati, A Taufiq, Sunaryono, M Diantoro, B Yuliarto, S Suyatman, N Nugraha and D Kurniadi.....94

**OPEN ACCESS** 

The Scale Formation of Barite (BaSO<sub>4</sub>) from Laminar Flowing Water in The Presence of Tartaric Acid and Ba<sup>2+</sup> Concentration Variation of Solution

F Fatra, G Ivanto, N S Dera, S Muryanto and A P Bayuseno....101

012015

**OPEN ACCESS** 

<u>Citric Acid Addition to Controlling Crystallization of Barium Sulphate (BaSO<sub>4</sub>) in Pipes through Ba<sup>2+</sup> Concentration Variation in the Solution</u>

G Ivanto, F Fatra, N S Dera, S Muryanto and A P Bayuseno....107

012016

**OPEN ACCESS** 

<u>Phase Transformation of Limonite Nickel Ores with Na<sub>2</sub>SO<sub>4</sub> Addition in Selective</u> Reduction Process

W Mayangsari and A B Prasetyo.....113

012017

OPEN ACCESS

The Use of Heterogeneous Catalysts of Chitosan Sulfonate Bead on the Esterification Reaction of Oleic Acid and Methanol

H N Chamidy and Riniati.....122

012018

**OPEN ACCESS** 

CaSO<sub>4</sub> Scale Inhibition by a Trace Amount of Zinc Ion in Piping System

W Mangestiyono and Sutrisno....129

012019

**OPEN ACCESS** 

<u>Low-Temperature Carbothermic Reduction of Indonesia Nickel Lateritic Ore with Sub-</u>Bituminous Coal

I Setiawan, S Harjanto and R Subagja....138

OPEN ACCESS

<u>Preparation of Chitosan/Collagen Blend Membranes for Wound Dressing: A Study on FTIR Spectroscopy and Mechanical Properties</u>

D J Indrani, F Lukitowati and Y Yulizar....147

012021

**OPEN ACCESS** 

Solid State Reaction Synthesis of Si-HA as Potential Biomedical Material: An Endeavor to Enhance the Added Value of Indonesian Mineral Resources

Hartatiek, Yudyanto, S D Ratnasari, R Y Windari and N Hidayat.....156

012022

**OPEN ACCESS** 

Aging Time Effect on Porous Characteristics of Natural Mud-based Silica Prepared by Hydrothermal-Coprecipitation Route

A Ubaid, N Hidayat and Munasir....164

012023

**OPEN ACCESS** 

Magnetic Susceptibility and Morphology of Natural Magnetic Mineral Deposit in Vicinity of Human's Living

S Zulaikah, R Azzahro, S B Pranita, E S Mu'alimah, N Munfarikha, Dewiningsih, W L Fitria and H A Niarta.....170

012024

**OPEN ACCESS** 

<u>Preparation of Superparamagnetic Zn<sub>0.5</sub>Mn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub> Particle by Coprecipitation-Sonochemical Method for Radar Absorbing Material</u>

A Taufiq, S Bahtiar, Sunaryono, N Hidayat, A Hidayat, N Mufti, M Diantoro, A Fuad, Munasir, R Rahmawati, W A Adi, S Pratapa and Darminto.....176

**OPEN ACCESS** 

The Effect of Sintering Temperature on The Rolled Silver-Sheathed Monofilament Bi,Pb-Sr-Ca-Cu-O Superconducting Wire

Hendrik, P Sebleku, B Siswayanti and A W Pramono.....188

012026

**OPEN ACCESS** 

Low-Temperature Nitriding of Pure Titanium by using Hollow Cathode RF-DC Plasma

J M Windajanti, D J Djoko H S and Abdurrouf.....194

012027

**OPEN ACCESS** 

Optical Properties Characterization of Gamma Irradiated CeO<sub>2</sub> Nanoparticles Solution

I Nurhasanah, A Luthfia and Z Arifin....202

012028

**OPEN ACCESS** 

Microstructures and Mechanical Study of Mg Alloy Foam Based on Mg-Zn-Ca-CaCO<sub>3</sub> System

A Erryani, F Pramuji, D Annur, M I Amal and I Kartika.....208

012029

**OPEN ACCESS** 

Phase Analysis and Crystal Morphology of Barium Sulphate Precipitated from The Laminar Flowing Water

N S Dera, F Fatra, G Ivanto, S Muryanto and A P Bayuseno....216

012030

**OPEN ACCESS** 

Noninvasive and Painless Urine Glucose Detection by Using Computer-based Polarimeter

Sutrisno, Y A Laksono and N Hidayat.....226

OPEN ACCESS

Inexpensive Home-Made Single Wavelength Ellipsometer ( $\lambda = 633$  nm) for Measuring the Optical Constant of Nanostructured Materials

L Z Maulana, K Megasari, E Suharyadi, R Anugraha, K Abraha and I Santoso.....231

012032

OPEN ACCESS

Effect of Fe<sub>3</sub>O<sub>4</sub> Magnetic Nanoparticle Concentration on the Signal of Surface Plasmon Resonance (SPR) Spectroscopy

M Oktivina, D T Nurrohman, A N Q Z Rinto, E Suharyadi and K Abraha.....239

012033

OPEN ACCESS

Effects of Sintering Holding Time on the Structural, Electrical and Magnetic Properties of Zn<sub>0.95</sub>Ni<sub>0.05</sub>O

M Ginting, D Aryanto, C Kurniawan, A Y Sari, A Subhan, T Sudiro, P Sebayang, E R Tarigan, M N Nasruddin and K Sebayang.....246

012034

**OPEN ACCESS** 

Synthesis and Characterization of Ti-6Al-6Mo Prepared by Arc Melting Process

G Senopati, I N G Putrayasa and A C Sutowo.....252

012035

**OPEN ACCESS** 

Corrosion Behavior of Magnesium Based Foam Structure in Hank's Solution

P L Franciska, A Erryani, D Annur and I Kartika.....258

012036

**OPEN ACCESS** 

The Effect of Substrate Temperature on Surface Modification of Polystyrene by using Nitrogen Plasma

A F Novi, D J D H Santjojo and Masruroh.....268

**OPEN ACCESS** 

Optimizing Heat Treatment Process of Fe-13Cr-3Mo-3Ni Martensitic Stainless of Steel

M S Anwar, S Prifiharni and E Mabruri.....274

012038

**OPEN ACCESS** 

Fe-doped ZnO Supported with Montmorillonite: Synthesis, Characterization, and Photocatalytic Activity

M I Pratiwi, N Afifah and R Saleh.....280

012039

**OPEN ACCESS** 

Study of Sigma Phase in Duplex SAF 2507

D M Fellicia, Sutarsis, B A Kurniawan, D Wulanari, A Purniawan and A T Wibisono.....285

012040

**OPEN ACCESS** 

Study of Raman Spectra of Aluminum Powder-Substituted Barium Hexaferrite (BaM) BaFe<sub>12-x</sub>Al<sub>x</sub>O<sub>19</sub> as a Result of Solid State Reaction Process

S Mustofa, R Rizaldy and W A Adi....292

012041

**OPEN ACCESS** 

Analysis of Distribution of Polyvinyl Alcohol Hydrogel Nanocrystalline by using SAXS Synchrotron

Sunaryono, A Taufiq, N Mufti, N Hidayat, S Rugmai, S Soontaranon, E G R Putra and Darminto.....300

012042

**OPEN ACCESS** 

<u>Crystal Structure, Optical, and Electrical Properties of SnSe and SnS Semiconductor Thin</u> Films Prepared by Vacuum Evaporation Techniques for Solar Cell Applications

Ariswan, H Sutrisno and R Prasetyawati.....309

**OPEN ACCESS** 

Synthesis of Polyvinylpyrrolidone (PVP)-Green Tea Extract Composite Nanostructures using Electrohydrodynamic Spraying Technique

Kamaruddin, D Edikresnha, I Sriyanti, M M Munir and Khairurrijal.....316

012044

**OPEN ACCESS** 

Photodegradation of Rhodamine B by using ZnFe<sub>2</sub>O<sub>4</sub> Nanoparticles Synthesized through Precipitation Method

Karnaji and I Nurhasanah.....323

012045

**OPEN ACCESS** 

Effect of Synthesis Parameter on Crystal Structures and Magnetic Properties of Magnesium Nickel Ferrite (Mg<sub>0.5</sub>Ni<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>) Nanoparticles

R Maulia, R A Putra and E Suharyadi....329

012046

**OPEN ACCESS** 

Study on The Influence of Crystal Structure and Grain Size on Dielectric Properties of Manganese Ferrite (MnFe<sub>2</sub>O<sub>4</sub>) Nanoparticles

Kurnia, Heriansyah and E Suharyadi.....336

012047

**OPEN ACCESS** 

Study of Structural and Magnetic Properties of Silica and Polyethylene Glycol (PEG-4000)-Encapsulated Magnesium Nickel Ferrite (Mg<sub>0.5</sub>Ni<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>) Nanoparticles

F Deswardani, R Maulia and E Suharyadi.....343

012048

**OPEN ACCESS** 

Effect of Synthesis Temperature and NaOH Concentration on Microstructural and Magnetic Properties of Mn<sub>0.5</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub> Nanoparticles

N Siregar, I P T Indrayana, E Suharyadi, T Kato and S Iwata.....352

012049 OPEN ACCESS

Effect of Cu-Dopant on the Structural, Magnetic and Electrical Properties of ZnO

D Aryanto, C Kurniawan, A Subhan, T Sudiro, P Sebayang, M Ginting, S M K Siregar and M N Nasruddin.....361

012050

**OPEN ACCESS** 

Effect of Growth Time on the Characteristics of ZnO Nanorods

R Idiawati, N Mufti, A Taufiq, H Wisodo, I K R Laila, A Fuad and Sunaryono....367

012051

**OPEN ACCESS** 

<u>Synthesis and Characterization of Magnetic Elastomer based PEG-Coated Fe<sub>3</sub>O<sub>4</sub> from Natural Iron Sand</u>

C Kurniawan, A S Eko, Y S Ayu, P T A Sihite, M Ginting, P Simamora and P Sebayang.....375

012052

**OPEN ACCESS** 

Synthesis, Investigation on Structural and Magnetic Behaviors of Spinel M-Ferrite [M = Fe; Zn; Mn] Nanoparticles from Iron Sand

S Bahtiar, A Taufiq, Sunaryono, A Hidayat, N Hidayat, M Diantoro, N Mufti and Mujamilah.....382

012053

**OPEN ACCESS** 

Variation of Carbon Coating on Li<sub>2</sub>Na<sub>2</sub>Ti<sub>6</sub>O<sub>14</sub> as Anode Material of Lithium Battery

B Prihandoko, S Priyono, A Subhan and A Mulya.....390

012054

**OPEN ACCESS** 

Optical Properties of Fe<sub>3</sub>O<sub>4</sub> Magnetic Fluid from Iron Sand

A Puspitaningrum, A Taufiq, A Hidayat, Sunaryono, N Hidayat and Samian.....396

**OPEN ACCESS** 

<u>High-Performance Silver Nanowire Film on Flexible Substrate Prepared by Meyer-rod Coating</u>

Junaidi, K Triyana, Harsojo and E Suharyadi.....405

012056

**OPEN ACCESS** 

Effect of NiO and Light Intensity on Dielectric Constant of SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Bi<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>CO<sub>3</sub> Glass Based on Silica Gel of Natural Sands

M Diantoro, Z Muniroh, B Zaini, A A Mustikasari, Nasikhudin, A Hidayat, A Taufiq, Sunaryono and N. Mufti.....411

012057

**OPEN ACCESS** 

 $\underline{Composites\ of\ Fe_3O_4/SiO_2\ from\ Natural\ Material\ Synthesized\ by\ Co-Precipitation\ Method}$ 

Munasir, A S Dewanto, A Yulianingsih, I K F Saadah, Z A I Supardi, A Mufid and A Taufiq.....423

012058

**OPEN ACCESS** 

<u>Fabrication of TiO<sub>2</sub>/Carbon Photocatalyst using Submerged DC Arc Discharged in</u> Ethanol/Acetic Acid Medium

T E Saraswati, A O Nandika, I F Andhika, Patiha, C Purnawan, S Wahyuningsih and S B Rahardjo.....429

012059

**OPEN ACCESS** 

Synthesis and Characterization of Microwave Absorber SiO<sub>2</sub> by Sol-Gel Methode

S Wardiyati, W A Adi and Deswita.....436

012060

**OPEN ACCESS** 

Natural Silica Sand/Alumina Ceramic Composites: Promising Candidates for Fuel-Cell Sealants

N Hidayat, Istiqomah, M Y H Widianto, A Taufiq, Sunaryono, Triwikantoro, M Zainuri, M A Baqiya, G Aristia and S Pratapa.....445

012061 OPEN ACCESS

<u>Ag/Fe<sub>3</sub>O<sub>4</sub>/ZrO<sub>2</sub> Composite: Ternary Magnetically Separable UV-light-driven Photocatalyst for Removal Methylene Blue Dyes</u>

Y Kristianto, A Taufik and R Saleh....452

012062

**OPEN ACCESS** 

Effect of Fe<sub>3</sub>O<sub>4</sub> on the Electro-Optic and Magneto-Electric Characteristics of (PANI/Fe<sub>3</sub>O<sub>4</sub>)-Ag Film

M Diantoro, D Pradhana, A A Mustikasari, A D Kusumawati, A Taufiq, Sunaryono, N Mufti and H Nur.....458

012063

**OPEN ACCESS** 

Effect of Crystallite Structure and Graphene Incorporation on Photocatalytic Performance of LaFeO<sub>3</sub>

N Afifah and R Saleh.....466

012064

**OPEN ACCESS** 

Factors Influence the Structural and Magnetic Properties of Ag-Fe<sub>3</sub>O<sub>4</sub> Nanocomposites Synthesized by Reduction Method

F Fajaroh and Nazriati.....471

012065

**OPEN ACCESS** 

Sonocatalytic Degradation of Methylene Blue with LaMnO<sub>3</sub> Supported by Different Surface Area of Graphene

N Afifah and R Saleh....475

**OPEN ACCESS** 

Nanoneedles of Lanthanum Oxide (La<sub>2</sub>O<sub>3</sub>): A Novel Functional Material for Microwave Absorber Material

W A Adi, S Wardiyati and S H Dewi.....480

012067

**OPEN ACCESS** 

Effect of Thermal Processes on the Electrical and Optical Properties of Fe<sub>2</sub>TiO<sub>5</sub> Ceramics

R Fajarin, Widyastuti, M A Baqiya and I Y S Putri.....488

012068

**OPEN ACCESS** 

Mechanosynthesis of A Ferritic ODS (Oxide Dispersion Strengthened) Steel Containing 14% Chromium and Its Characterization

A K Rivai, A Dimyati and W A Adi.....492

012069

**OPEN ACCESS** 

Methyl Ester Production via Heterogeneous Acid-Catalyzed Simultaneous Transesterification and Esterification Reactions

S Indrayanah, Erwin, I N Marsih, Suprapto and I K Murwani.....498

012070

**OPEN ACCESS** 

Synthesis of Zinc Oxide Nanoparticles using Anthocyanin as a Capping Agent

N L W Septiani, B Yuliarto, M Iqbal and Nugraha.....506

012071

**OPEN ACCESS** 

<u>Microstructure Transformation of Mg-1.6Gd during Hot Rolled at High Deformation</u> Ratio

O Susanti, M A Mochtar and S Harjanto.....510

**OPEN ACCESS** 

The Effect of Molar Ratio on Crystal Structure and Morphology of Nd<sub>1+X</sub>FeO<sub>3</sub> (X=0.1, 0.2, and 0.3) Oxide Alloy Material Synthesized by Solid State Reaction Method

V Zharvan, Y N I Kamaruddin, S Samnur and E H Sujiono.....516

012073

**OPEN ACCESS** 

 $\frac{Modification\ of\ Pseudobrookite\ Fe_{2-X}Mn_xTiO_5\ with\ Solid\ State\ Reaction\ Method\ using\ a}{Mechanical\ Milling}$ 

Y Sarwanto and W A Adi.....522

012074

**OPEN ACCESS** 

Effect of Precursor Concentration Ratio on The Crystal Structure, Morphology, and Band Gap of ZnO Nanorods

A Fuad, A A Fibriyanti, Subakti, N Mufti and A Taufiq.....529

012075

**OPEN ACCESS** 

<u>Physical and Magnetic Properties of La<sub>0.5</sub>Ca<sub>0.5</sub>Mn<sub>0.9</sub>Cu<sub>0.1</sub>O<sub>3</sub> at Temperature in the Range of 10-100 K</u>

Y E Gunanto, W A Adi, E Steven, B Kurniawan, T Ono and H Tanaka.....537

012076

**OPEN ACCESS** 

Effect of Heat Treatment on The Crystal Structur, Electrical Conductivity and Surface of Ba<sub>1.5</sub>Sr<sub>0.5</sub>Fe<sub>2</sub>O<sub>5</sub> Composite

P Purwanto, WA Adi and Yunasfi.....544

012077

**OPEN ACCESS** 

Monitoring Microalgae Population Growth by using Fe<sub>3</sub>O<sub>4</sub> Nanoparticles-based Surface Plasmon Resonance (SPR) Biosensor

D T Nurrohman, M Oktivina, E Suharyadi, E A Suyono and K Abraha.....550

**OPEN ACCESS** 

The Addition of Graphene and Magnetite Materials in TiO<sub>2</sub>/CuO Catalyst for Enhancing Photosonocatalytic Performance and Reusability

A Taufik, A Muzaki and R Saleh.....558

012079

**OPEN ACCESS** 

Synthesis and Characterization of Acrylic-Based Photopolymer as a Candidate for Denture Base Material

S T Wicaksono, Rasyida and H Ardhyananta.....566

012080

**OPEN ACCESS** 

Composite Based Chitosan/Zinc-Doped HA as a Candidate Material for Bone Substitute Applications

S T Wicaksono, A Rasyida, A Purnomo, N N Pradita, H Ardhyananta and M I P Hidayat.....576

012081

OPEN ACCESS

<u>Investigation on the Mechanical Properties of A356 Alloy Reinforced AlTiB/SiCp</u> Composite by Semi-Solid Stir Casting Method

E I Bhiftime and N F D S Gueterres.....583

012082

OPEN ACCESS

Poly (1,8 Octanediol-co-Citrate) Hydroxyapatite Composite as Antibacterial Biodegradable Bone Screw

P Widiyanti, I Sholikhah, A Isfandiary, NAF Hasbiyani, M B Lazuardi and R D Laksana.....594

**OPEN ACCESS** 

The Effects of the Addition of Silica Mol Fraction (x = 1.5; 2; 2.5) as a Solid Electrolyte on Ion Conductivity of NASICON ( $Na_{1-x}Zr_2Si_xP_{3-x}O_{12}$ ) Using Solid-State Method

V M Pratiwi, H Purwaningsih, Widyastuti, R Fajarin and H Setyawan.....602

012084

**OPEN ACCESS** 

Effects of Austenitizing and Forging on Mechanical Properties of MIL A-12560/AISI 4340 Steel

S Herbirowo, B Adjiantoro and T B Romijarso.....609

012085

**OPEN ACCESS** 

<u>Influence of Austenitizing Heat Treatment on the Properties of the Tempered Type 410-1Mo Stainless Steel</u>

E Mabruri, Z A Syahlan, Sahlan, S Prifiharni, M S Anwar, S A Chandra, T B Romijarso and B Adjiantoro.....614

012086

**OPEN ACCESS** 

Fluorescence Sensing of Nitrite Ions on Polyvinylpyrrolidone/Zinc Oxide Composites Prepared by Impregnation Method

L Yuliati, S Z M So'ad, N S Alim and H O Lintang.....621

012087

**OPEN ACCESS** 

Blending of Low-Density Polyethylene and Poly-Lactic Acid with Maleic Anhydride as A Compatibilizer for Better Environmentally Food-Packaging Material

A H Setiawan and F Aulia.....628

012088

**OPEN ACCESS** 

<u>Mechanical and Thermal Properties of Unsaturated Polyester/Vinyl Ester Blends Cured at Room Temperature</u>

H Ardhyananta, F D Puspadewa, S T Wicaksono, Widyastuti, A T Wibisono, B A Kurniawan, H Ismail and A V Salsac.....636

**OPEN ACCESS** 

Characteristics of Al-Si-Mg Reinforced SiC Composites Produced by Stir Casting Route

A Zulfia, T Zhakiah, D Dhaneswara and Sutopo.....644

012090

**OPEN ACCESS** 

The Structure, Magnetic and Absorption Properties of Zn-Ti Substituted Barium-Strontium Hexaferrite Prepared by Mechanochemical Process

D S Winataputra, T L Ujiyanti and W A Adi.....653

012091

**OPEN ACCESS** 

<u>Influence of External Magnetic Field on Potential Differences of Long Josephson</u> Junction

A Hidayat, Y P Hardianto, E Latifah, H Wisodo and A Taufiq.....663

012092

**OPEN ACCESS** 

The Effect of Temperature in Induction Surface Hardening on the Distortion of Gear

N F D S Guterres, Rusnaldy and A Widodo.....671

012093

**OPEN ACCESS** 

Effect of Temperature on the Conduction Properties of Oligo-phenyl-phenylene (OPP) Molecule

S Setianto, H S Aswad and Y M Jajat.....679

012094

**OPEN ACCESS** 

Risk Analysis of Central Java Gas Transmission Pipeline by Risk-Based Inspection Method

Mediansyah, G D Haryadi, R Ismail and S J Kim.....685

012095 OPEN ACCESS

Finite Element Study of the Effect of UHMWPE Liner Thickness on the Contact Area and Stress Distribution in a Bipolar Hip Joint

J Jamari, E Saputra, I B Anwar, R Ismail and E V D Heide.....692

012096

**OPEN ACCESS** 

<u>Influence of Glass Fiber Nonlinearity and Dispersion on Light propagation in Double</u> <u>Core Optical Fiber</u>

A Hidayat, A Listanti, E Latifah, H Wisodo, Nugroho A P and A Taufig.....700

012097

**OPEN ACCESS** 

A Study of Chip Formation Feedrates of Various Steels in Low-Speed Milling Process

L Prasetyo, M Tauviqirrahman and Rusnaldy.....707

012098

**OPEN ACCESS** 

<u>Investigation of the Influence of Shapes-Texture on Surface Deformation of UHMWPE as a Bearing Material in Static Normal Load and Rolling Contact</u>

W D Lestari, R Ismail, J Jamari and A P Bayuseno.....713

012099

**OPEN ACCESS** 

Risk Analysis using Corrosion Rate Parameter on Gas Transmission Pipeline

B Sasikirono, S J Kim, G D Haryadi and A Huda.....721

012100

**OPEN ACCESS** 

<u>Vector Analysis of Ionic Collision on CaCO<sub>3</sub> Precipitation Based on Vibration Time</u> <u>History</u>

W Mangestiyono, S Muryanto, J Jamari and A P Bayuseno.....731