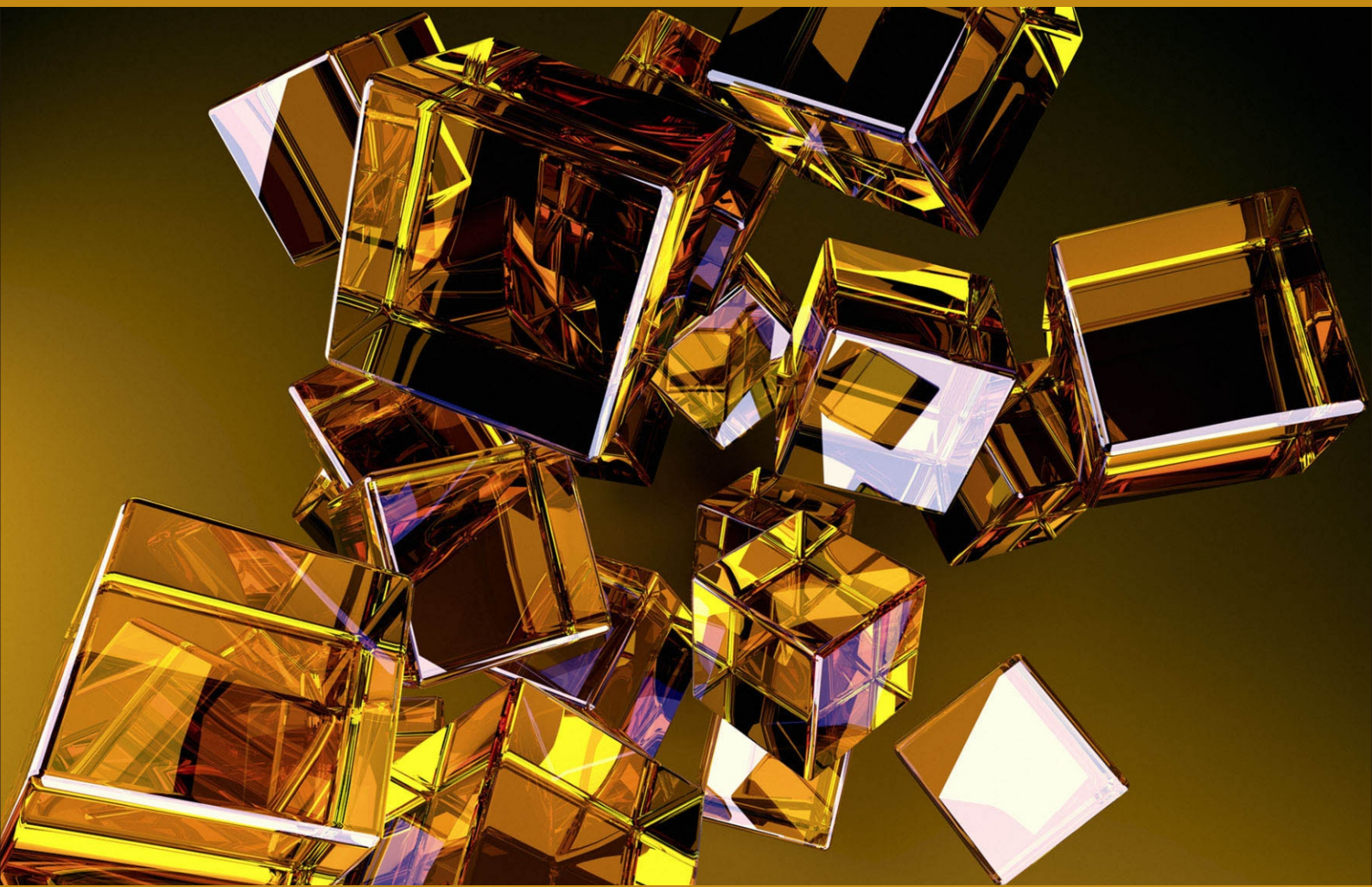


ISSN: 2153-117X Volume 9, Number 1, January 2018



Materials Sciences and Applications



ISSN: 2153-117X



www.scirp.org/journal/msa

Journal Editorial Board

ISSN 2153-117X (Print) ISSN 2153-1188 (Online)

<http://www.scirp.org/journal/msa>

Editor-in-Chief

Prof. Young W. Kwon

Naval Postgraduate School, USA

Editorial Board

Prof. Mutlu Özcan

University of Zurich, Switzerland

Prof. Alaa S. Abd-El-Aziz

University of Prince Edward Island, Canada

Prof. Samir A. Abdel-Latif

Helwan University, Egypt

Prof. Nacer Badi

University of Houston, USA

Prof. Huan-Tsung Chang

National Taiwan University, Chinese Taipei

Prof. Walid M. Daoush

Helwan University, Egypt

Prof. Nasrallah M. Deraz

National Research Center, Egypt

Dr. Chu Chun Hung

The University of Hong Kong, China

Prof. Khaled M. Ibrahim

Permanent Central Metallurgical R&D Institute, Egypt

Prof. Rob Krams

Imperial College, UK

Prof. Sergey Krasikov

Institute of Metallurgy of Ural Branch of the Russian
Academy of Sciences, Russia

Prof. Athanasios G. Mamalis

National Technical University of Athens, Greece

Prof. Chunxu Pan

Wuhan University, China

Prof. Su-Seng Pang

Louisiana State University, USA

Dr. Alessandro Pegoretti

University of Trento, Italy

Dr. Raj Pal Singh

National Chemical Laboratory, India

Dr. Deepak Srivastava

H. B. Technological Institute, India

Prof. Gayle E. Woloschak

Northwestern University, USA

Prof. Dongfeng Xue

Dalian University of Technology, China

Dr. Raghvendra Singh Yadav

Brno University of Technology, Czech Republic

Prof. Jory A. Yarmoff

University of California, USA

Dr. Fei Zhang

Michigan State University, USA

Table of Contents

Volume 9 Number 1

January 2018

Extended Anode Effect for Tube Inner Coating of Non-Conductive Ceramics by Pulsed Coaxial Magnetron Plasma	
M. T. I. Gasab, H. Sugawara, K. Sakata, H. Fujiyama.....	1
Surface Roughness Quality and Dimensional Accuracy—A Comprehensive Analysis of 100% Infill Printed Parts Fabricated by a Personal/Desktop Cost-Effective FDM 3D Printer	
M. S. Alsoufi, A. E. Elsayed.....	11
Structural and Thermomechanical Study of Plastic Films Made from Cassava-Starch Reinforced with Kaolin and Metakaolin	
N. Meite, L. K. Konan, D. Bamba, B. I. H. Goure-Doubi, S. Oyetola.....	41
Study of Structural and Dielectrical Properties of Lead Free Polycrystalline Electro Ceramics $\text{Ba}_5\text{CaTi}_2\text{Nb}_8\text{O}_{30}$ (BCTN) for Microwave Tunable Device Applications	
S. Jindal, S. Devi, A. Vasishth, G. Kumar.....	55
Corrosion in Tap Water and Hot Water Supply Facilities of Stainless Steel Type 304 Pipes	
N. Tanaka, S. Sato, I. Watanabe, Y. Yamada, O. Sakurada.....	68
The Influence of Abnormal Segregation Band on Mechanical Properties of Hot Rolled Ferrite/Pearlite Steel Plate	
R. Feng, B. K. Gong, H. W. Cui, Y. K. Pan, J. H. Bao.....	81
Synthesis, Characterization, Optical and Transport Properties of BaSnO_3 Synthesized by Wet Chemical Route	
R. Kurre, S. Bajpai, P. K. Bajpai.....	92
Mechanochemically Metamorphosed Composites of Homogeneous Nanoscale Silicon and Silicate Oxides with Lithium and Metal Compounds	
N. Shimoi, M. Komatsu, Y. Tanaka, K. Tohji.....	111
Corrosion Pattern of Pipeline Steel in Petroleum Pipeline Water in the Presence of Biomass Derived Extracts of <i>Brassica oleracea</i> and <i>Citrus paradise</i> Mesocarp	
N. C. Ngobiri, K. Okorosaye-Orubite.....	126
Reclamation of Lithium Cobalt Oxide from Waste Lithium Ion Batteries to Be Used as Recycled Active Cathode Materials	
R. Qadir, F. Gulshan.....	142

Ageing Behavior of $\text{LiNi}_{0.80}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ Cathode Based Lithium Ion Cells—Influence of Phase Transition Processes

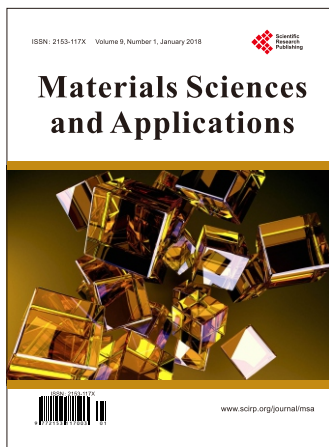
C. Betzin, H. Wolfschmidt.....155

Properties of Recycled-Polyethylene Terephthalate/Polycarbonate Blend Fabricated by Vented Barrel Injection Molding

W. Thodsaratpreeyakul, P. Uawongsuwan, T. Negoro.....174

Improvement of Sliding Performance for Ball on Disc Tribo-Partners Using Graphite Like Carbon Solid Lubricant Coating

X. B. Wen, H. T. Yao, S. C. Yang.....191



Materials Sciences and Applications

ISSN 2153-117X (Print) ISSN 2153-1188 (Online)

<http://www.scirp.org/journal/msa>

Materials Sciences and Applications (MSA) is an international refereed journal dedicated to the latest advancement of materials. The goal of this journal is to keep a record of the state-of-the-art research and promote the research work in these fast moving areas.

Editor-in-Chief

Prof. Young W. Kwon

Naval Postgraduate School, USA

Editorial Board

Prof. Mutlu Özcan

Prof. Khaled M. Ibrahim

Dr. Deepak Srivastava

Prof. Alaa S. Abd-El-Aziz

Prof. Rob Krams

Prof. Gayle E. Woloschak

Prof. Samir A. Abdel-Latif

Prof. Sergey Krasikov

Prof. Dongfeng Xue

Prof. Nacer Badi

Prof. Athanasios G. Mamalis

Dr. Raghvendra Singh Yadav

Prof. Huan-Tsung Chang

Prof. Chunxu Pan

Prof. Jory A. Yarmoff

Prof. Walid M. Daoush

Prof. Su-Seng Pang

Dr. Fei Zhang

Prof. Nasrallah M. Deraz

Dr. Alessandro Pegoretti

Dr. Chu Chun Hung

Dr. Raj Pal Singh

Subject Coverage

This journal invites original research and review papers that address the following issues in materials sciences and applications. Topics of interest include, but are not limited to:

- Biological, Biomechanical and Biomedical Materials
- Composite Materials
- Electrical and Electronics Materials
- Fibers and Matrix Materials
- Functional Materials, including Shape Memory Materials, Self Healing Materials, etc.
- Light Emitting Material
- Magnetic Material
- Materials Chemistry
- Metals and Alloys
- Nanocomposites
- Nanomaterials including Nanostructured and Nanoscale Materials
- Nanosensors
- Nanostructured Materials
- Organic Materials
- Physics, Chemistry, Mechanics and Applications in Materials Science
- Rubber/Elastomeric Materials
- Semiconductor Materials
- Textile Materials
- Thin Film and Coatings

We are also interested in: 1) Short Reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book Reviews—Comments and critiques.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

<http://www.scirp.org/journal/msa>

E-mail: msa@scirp.org