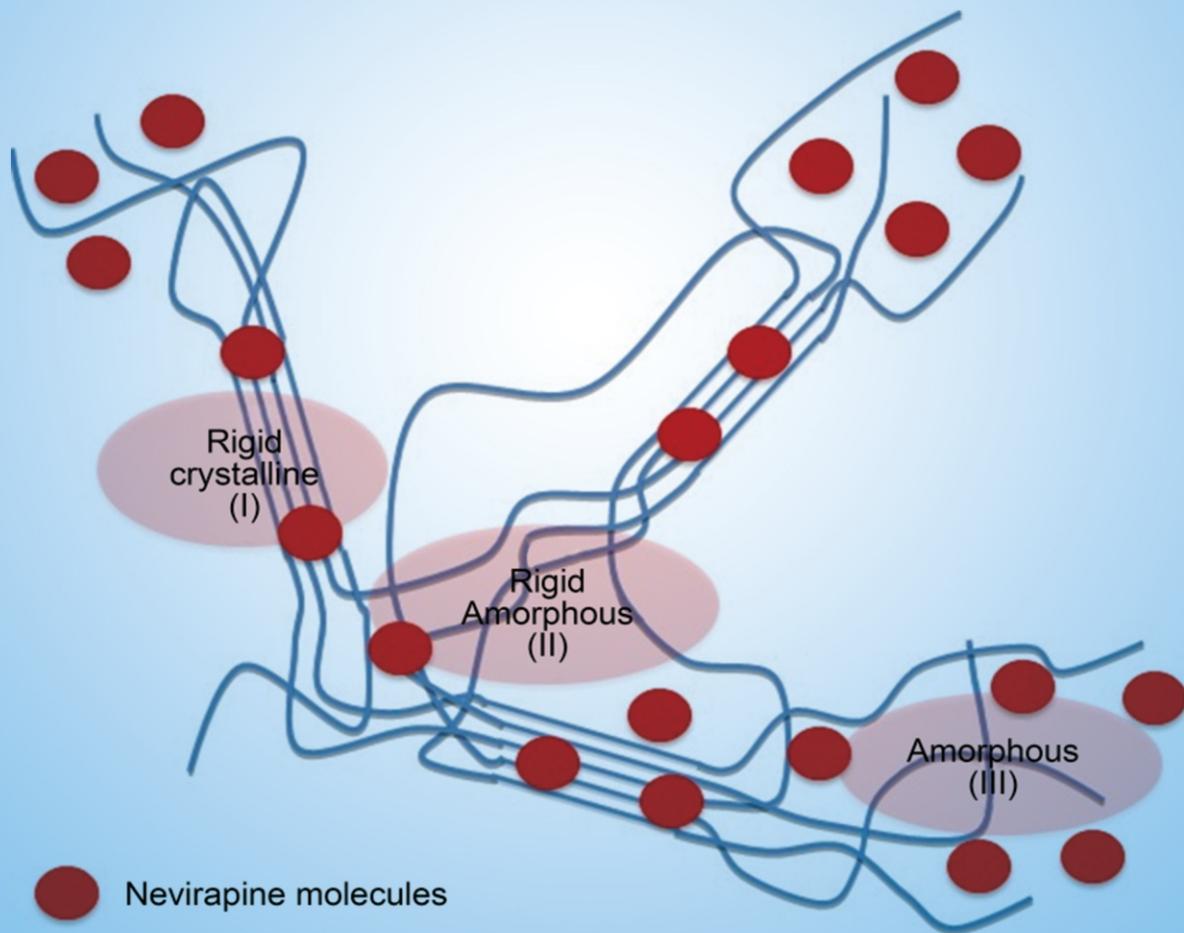


# Materials Sciences and Applications



ISSN: 2153-117X



# 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. 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. Raghendra 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 7 Number 11

November 2016

## Effect of Revolution on Inhomogeneous Deformation of IF Steel in High Pressure Torsion

Y. P. Song, M. M. Chen, B. Y. Xu, D. S. Gao, H. S. Kim.....673

## Evaluation of Nevirapine Release Kinetics from Polycaprolactone Hybrids

M. S. S. B. Monteiro, J. Lunz, P. J. Sebastião, M. I. B. Tavares.....680

## Preparation and Characterization of $\text{La}_{0.67-x}\text{Li}_{3x}\text{TiO}_3$ Solid-State Electrolyte Used for Electrochromic Mirrors

L. D. Trong, N. N. Dinh, D. H. Thanh.....702

## Effect of Environmental Conditions on Flexural Strength and Fracture Toughness of Particulate Filled Glass-Epoxy Hybrid Composites

B. Hulugappa, M. V. Achutha, B. Suresha.....710

## Predictive Elastoplastic Damage Constitutive Law: Establishment of Equivalence Relation between Intrinsic and Extrinsic Material Parameters

M.-A. Rezgui, M.-T. Nasri, M. Ayadi.....730

## Effect of Aqueous Extracts of *Salvadora persica* “Miswak” on the Acid Eroded Enamel Surface at Nano-Mechanical Scale

T. M. Bawazeer, M. S. Alsoufi, D. Katowah, W. S. Alharbi.....754

## Compressive Strength of Metakaolin-Based Geopolymers: Influence of KOH Concentration, Temperature, Time and Relative Humidity

T. A. García-Mejía, Ma. de L. Chávez-García.....772

## Wootz: Cast Iron or Steel?

D. A. Sukhanov, N. V. Plotnikova.....792

## Materials Sciences and Applications (MSA) Journal Information

### SUBSCRIPTIONS

The *Materials Sciences and Applications* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published monthly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$89 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### SERVICES

#### Advertisements

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### COPYRIGHT

#### Copyright and reuse rights for the front matter of the journal:

Copyright © 2016 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

#### Copyright for individual papers of the journal:

Copyright © 2016 by author(s) and Scientific Research Publishing Inc.

#### Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

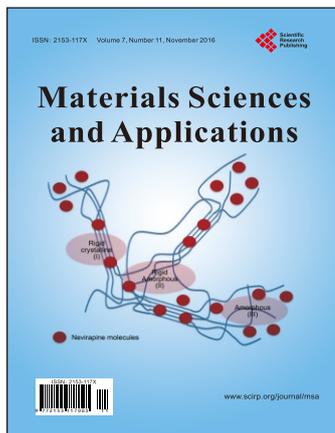
#### Disclaimer of liability

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

### PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: [msa@scirp.org](mailto:msa@scirp.org)



## 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**

**Prof. Gayle E. Woloschak**

**Prof. Alaa S. Abd-El-Aziz**

**Prof. Rob Krams**

**Prof. Dongfeng Xue**

**Prof. Samir A. Abdel-Latif**

**Prof. Athanasios G. Mamalis**

**Dr. Raghendra Singh Yadav**

**Prof. Nacer Badi**

**Prof. Chunxu Pan**

**Prof. Jory A. Yarmoff**

**Prof. Huan-Tsung Chang**

**Prof. Su-Seng Pang**

**Dr. Fei Zhang**

**Prof. Walid M. Daoush**

**Dr. Alessandro Pegoretti**

**Prof. Nasrallah M. Deraz**

**Dr. Raj Pal Singh**

**Dr. Chu Chun Hung**

**Dr. Deepak Srivastava**

### *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](mailto:msa@scirp.org)