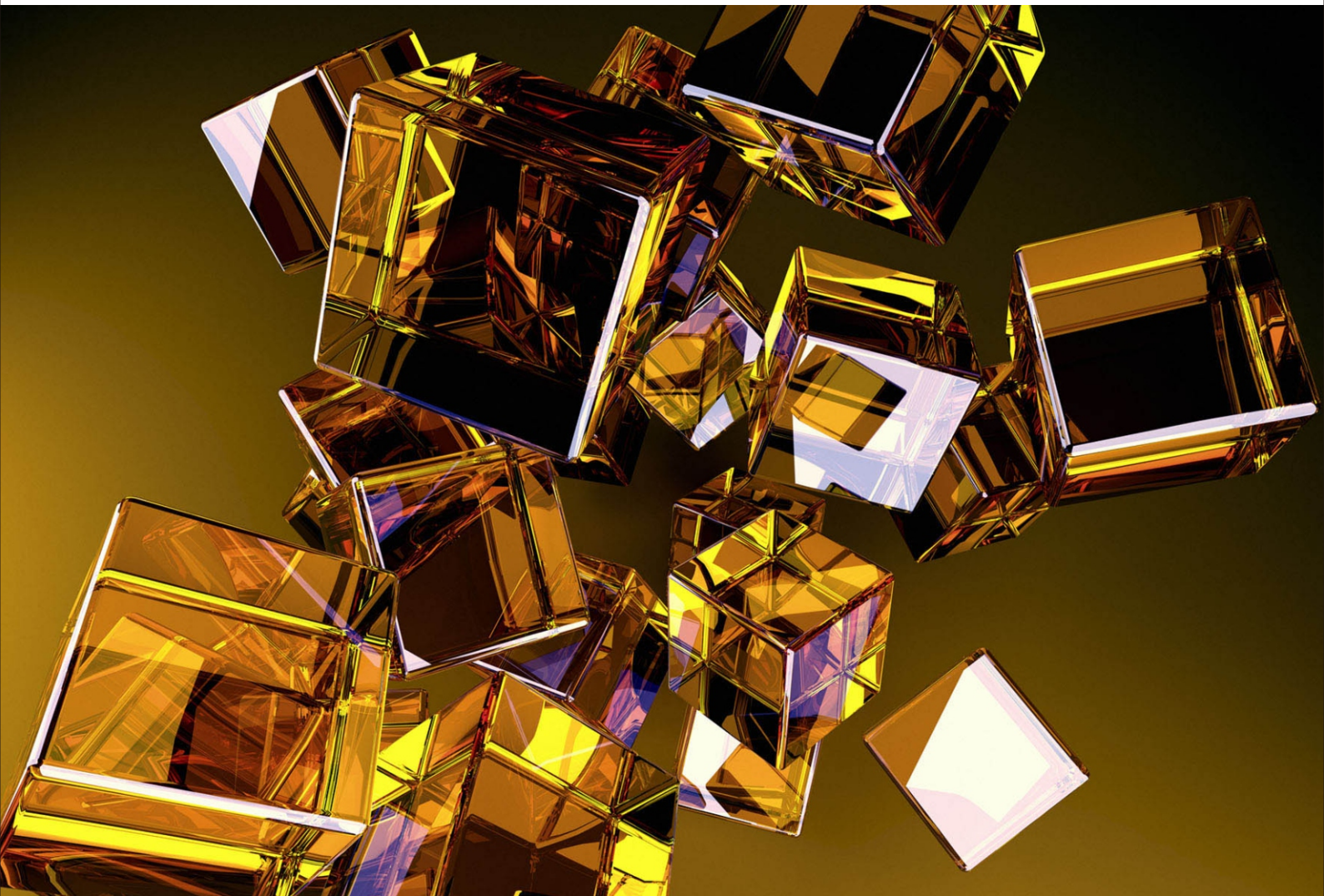


ISSN: 2153-117X Volume 15, Number 1, January 2024



# Materials Sciences and Applications



ISSN: 2153-117X



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

# Journal Editorial Board

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

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

---

## Editorial Board

<b>Prof. Mutlu Özcan</b>	University of Zurich, Switzerland
<b>Prof. Raed Abu-Reziq</b>	The Hebrew University of Jerusalem, Israel
<b>Prof. Nacer Badi</b>	University of Houston, USA
<b>Prof. Huan-Tsung Chang</b>	National Taiwan University, Chinese Taipei
<b>Dr. Emerson Oliveira da Silva</b>	Federal University of Rio de Janeiro, Brazil
<b>Prof. Walid M. Daoush</b>	Helwan University, Egypt
<b>Prof. Nasrallah M. Deraz</b>	National Research Center, Egypt
<b>Prof. Stephen U. Egarievwe</b>	Alabama A&M University, USA
<b>Prof. Manal Kamal Ismail El-bisi</b>	National Research Center, Egypt
<b>Dr. Eman El-Shenawy</b>	Central Metallurgical Research and Development Institute (CMRDI), Egypt
<b>Prof. Khaled M. Ibrahim</b>	Permanent Central Metallurgical R&D Institute, Egypt
<b>Prof. Ibrahim Karaman</b>	Texas A&M University, USA
<b>Prof. Sergey Krasikov</b>	Institute of Metallurgy of Ural Branch of the Russian Academy of Sciences, Russia
<b>Prof. Athanasios G. Mamalis</b>	National Technical University of Athens, Greece
<b>Prof. Luis Claudio Mendes</b>	Universidade Federal do Rio de Janeiro, Brazil
<b>Dr. Rui Neves</b>	Polytechnic Institute of Setúbal, Portugal
<b>Prof. Chunxu Pan</b>	Wuhan University, China
<b>Dr. Alessandro Pegoretti</b>	University of Trento, Italy
<b>Dr. Leinig Antonio Perazolli</b>	Universidade Estadual Paulista, Brazil
<b>Dr. Harekrushna Sutar</b>	Indira Gandhi Institute of Technology Sarang, India
<b>Prof. Mohamed A. Taha</b>	Ain-Shams University, Egypt
<b>Prof. Maria Ines Bruno Tavares</b>	Instituto de Macromoléculas Professora Eloisa Mano, Brazil
<b>Dr. Xiangliang Wan</b>	Wuhan University of Science and Technology, China
<b>Prof. Gayle E. Woloschak</b>	Northwestern University, USA
<b>Prof. Dongfeng Xue</b>	Dalian University of Technology, China
<b>Dr. Raghendra Singh Yadav</b>	Brno University of Technology, Czech Republic
<b>Prof. Jory A. Yarmoff</b>	University of California, USA
<b>Dr. Beddiaf Zaidi</b>	University of Batna 1, Algeria
<b>Dr. Fei Zhang</b>	Michigan State University, USA

# Table of Contents

**Volume 15    Number 1**

**January 2024**

**Enhancing Stress Intensity Factor Reduction in Cracks Originating from a Circular Hole  
in a Rectangular Plate under Uniaxial Stress through Piezoelectric Actuation**

G. K. Konda, J. Schuster, Y. P. Shaik..... 1

**Study of the Effect of Acetic Acid and Phosphate on Copper Corrosion by Immersion Tests**

Y. Yamaguchi, K. Sugiura, T. Arima, F. Takahashi, I. Ikeda, Y. Yamada, O. Sakurada..... 15

# Materials Sciences and Applications (MSA)

## Journal Information

### SUBSCRIPTIONS

The *Materials Sciences and Applications* (Online at Scientific Research Publishing, <https://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 © 2024 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 © 2024 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

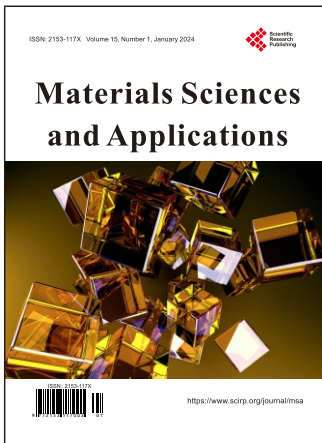
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any 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)

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

*Materials Sciences and Applications (MSA)* is an international journal dedicated to the latest advancements in 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.

### Editorial Board

Prof. Mutlu Özcan

Prof. Raed Abu-Reziq

Prof. Nacer Badi

Prof. Huan-Tsung Chang

Dr. Emerson Oliveira da Silva

Prof. Walid M. Daoush

Prof. Nasrallah M. Deraz

Prof. Stephen U. Egariyevwe

Prof. Manal Kamal Ismail El-bisi

Dr. Eman El-Shenawy

Prof. Khaled M. Ibrahim

Prof. Ibrahim Karaman

Prof. Sergey Krasikov

Prof. Athanasios G. Mamalis

Prof. Luis Claudio Mendes

Dr. Rui Neves

Prof. Chunxu Pan

Dr. Alessandro Pegoretti

Dr. Leinig Antonio Perazolli

Dr. Harekrushna Sutar

Prof. Mohamed A. Taha

Prof. Maria Ines Bruno Tavares

Dr. Xiangliang Wan

Prof. Gayle E. Woloschak

Prof. Dongfeng Xue

Dr. Raghendra Singh Yadav

Prof. Jory A. Yarmoff

Dr. Beddiaf Zaidi

Dr. Fei Zhang

### 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

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

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