

ISSN: 2161-4881 Volume 7, Number 1, January 2017



# Journal of Surface Engineered Materials and Advanced Technology



[www.scirp.org/journal/jsemat](http://www.scirp.org/journal/jsemat)

# Journal Editorial Board

ISSN 2161-4881 (Print) ISSN 2161-489X (Online)

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

## Editor-in-Chief

**Prof. Bouzid Menaâ** Fluorotronics Inc., USA

## Editorial Board

**Prof. Adnane Abdelghani** National Institute of Applied Science and Technology, Tunisia  
**Prof. Vamsi Krishna Balla** Central Glass and Ceramic Research Institute, India  
**Prof. Filippo Berto** University of Padua, Italy  
**Prof. Elena Binkauskienė** Centre for Physical Science and Technology, Lithuania  
**Prof. Gerardino D'Errico** University of Naples "Federico II", Italy  
**Prof. Wenfeng Ding** Nanjing University of Aeronautics and Astronautics, China  
**Prof. Eduardo Alfredo Favret** Centro de Investigaciones en Recursos Naturales (CIRN), Argentina  
**Prof. Ahmed Ibrahim** Farmingdale State College, USA  
**Prof. Yuri P. Kalmykov** University of Perpignan, France  
**Prof. Zhixin Kang** Guangdong Key Laboratory for Advanced Metallic Materials Processing, China  
**Prof. Hyunjung Kim** Chonbuk National University, South Korea  
**Prof. Xuan Tuan Le** Microfabrication Development, Canada  
**Prof. Ioannis Liritzis** University of the Aegean, Greece  
**Prof. Francisco M. Márquez-Linares** Universidad del Turabo, USA  
**Prof. Abdel Salam H. Makhlouf** University of Texas-Pan American, USA  
**Prof. Jukka Pekka Matinlinna** The University of Hong Kong, China  
**Prof. K. A. Natarajan** Indian Institute of Science, India  
**Dr. Gary R. Pickrell** Virginia Polytechnic Institute and State University, USA  
**Prof. Nicola Pugno** University of Trento, Italy  
**Prof. M. V. Reddy** National University of Singapore (NUS), Singapore  
**Prof. Zhifeng Ren** University of Houston, USA  
**Prof. Maria Richert** AGH University of Science & Technology, Poland  
**Prof. Juan M. Ruso** University of Santiago de Compostela (USC), Spain  
**Prof. Cristina Satriano** University of Catania, Italy  
**Prof. Young-Seok Shon** California State University, USA  
**Prof. Hiroaki Tada** Kinki University, Japan  
**Prof. Rafael Tadmor** Lamar University, USA  
**Dr. Peng Wang** Qualcomm Technologies, Inc., USA  
**Prof. Yaohua Zhu** The Hong Kong Polytechnic University, China

# Table of Contents

**Volume 7    Number 1**

**January 2017**

**Elaboration and Magnetic Properties of Cobalt-Palladium Magnetic Nanowires Encapsulated  
in Carbon Nanotubes**

O. Rousseau, C. Locard, A. Kane, Y. Roussigné, S. Farhat, S. M. Chérif.....1

**Photocatalytic Activity of Titanium Dioxide Powder Fabricated from an Anodized  
Titanium Sheet under Ultra-Violet and Visible Light Irradiation**

M. Kaneko, K. Tokuno, K. Yamagishi, T. Wada, T. Hasegawa.....13

# Journal of Surface Engineered Materials and Advanced Technology (JSEMAT)

## Journal Information

### SUBSCRIPTIONS

The *Journal of Surface Engineered Materials and Advanced Technology* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published quarterly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$79 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 © 2017 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 © 2017 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: [jsemat@scirp.org](mailto:jsemat@scirp.org)



# Journal of Surface Engineered Materials and Advanced Technology (JSEMAT)

ISSN Print: 2161-4881 ISSN Online: 2161-489X  
<http://www.scirp.org/journal/jsemat>

**Journal of Surface Engineered Materials and Advanced Technology (JSEMAT)** is an international, specialized, English-language journal devoted to publication of original contributions concerning surface sciences, surface properties, techniques of characterization and generated applications.

It is an open-access, peer-reviewed journal describing scientific and technological advances that cover the basic sciences, engineering aspects and applied technology of surface chemistry, surface materials sciences and engineering studies for applications in nanotechnology, biomaterials, optics, environment, architectural restoration including all kind of materials surfaces.

## Subject Coverage

The journal publishes the highest quality original full articles, communications, notes, reviews, special issues and books, covering both the experimental and theoretical aspects including but not limited to:

- Adsorption Process and Principles
- Advances in Adhesion Sciences
- Interface Sciences and Applications
- Intermolecular Interactions
- Kinetics and Thermodynamics at Surfaces
- Modeling Theory of Surface Chemistry
- Single Molecule Force Spectroscopy
- Surface Biocompatibility
- Surface Characterization and Advanced Techniques
- Surface Corrosion
- Surface Crystallization
- Surface Hydration at Solid/Liquid Interface
- Surface Interactions at Bio-Interfaces
- Surface Interactions at the Nanoscale
- Surface Microscopy (SEM, AFM, High Speed AFM, STM...)
- Surface Molecules Self-Assembly
- Surface Nanopatterning

Papers are acceptable provided they report important findings, novel insights or useful techniques within the scope of the journal. All manuscript must be prepared in English, and are subjected to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by prints in hard copy. It will be available through <http://www.scirp.org/journal/jsemat/>.

## 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/jsemat>

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