

# Journal of Surface Engineered Materials and Advanced Technology





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 Menaa

Fluorotronics Inc., USA

#### **Editorial Board**

Prof. Adnane Abdelghani Prof. Vamsi Krishna Balla Prof. Filippo Berto Prof. Elena Binkauskiene Prof. Gerardino D'Errico Prof. Wenfeng Ding Prof. Eduardo Alfredo Favret Prof. Ahmed Ibrahim Prof. Yuri P. Kalmykov Prof. Zhixin Kang

Prof. Hyunjung Kim Prof. Xuan Tuan Le **Prof. Ioannis Liritzis** Prof. Francisco M. Márquez-Linares Prof. Abdel Salam H. Makhlouf Prof. Jukka Pekka Matinlinna Prof. K. A. Natarajan Dr. Gary R. Pickrell **Prof. Nicola Pugno** Prof. M. V. Reddy **Prof. Zhifeng Ren Prof. Maria Richert** Prof. Juan M. Ruso **Prof. Cristina Satriano Prof. Young-Seok Shon** Prof. Hiroaki Tada Prof. Rafael Tadmor Dr. Peng Wang Prof. Yaohua Zhu

National Institute of Applied Science and Technology, Tunisia Central Glass and Ceramic Research Institute, India University of Padua, Italy Centre for Physical Science and Technology, Lithuania University of Naples "Federico II", Italy Nanjing University of Aeronautics and Astronautics, China Centro de Investigaciones en Recursos Naturales (CIRN), Argentina Farmingdale State College, USA University of Perpignan, France Guangdong Key Laboratory for Advanced Metallic Materials Processing, China Chonbuk National University, South Korea Microfabrication Development, Canada University of the Aegean, Greece Universidad del Turabo, USA University of Texas-Pan American, USA The University of Hong Kong, China Indian Institute of Science, India Virginia Polytechnic Institute and State University, USA University of Trento, Italy National University of Singapore (NUS), Singapore University of Houston, USA AGH University of Science & Technology, Poland University of Santiago de Compostela (USC), Spain University of Catania, Italy California State University, USA Kinki University, Japan Lamar University, USA Qualcomm Technologies, Inc., USA The Hong Kong Polytechnic University, China

Journal of Surface Engineered Materials and Advanced Technology, 2015, 5, 1-63 Published Online January 2015 in SciRes. <u>http://www.scirp.org/journal/jsemat</u>



# **Table of Contents**

Volume 5 Number 1	January	2015
A Study of Porosity Effect on Tribologie	cal Behavior of Cast Al A380M and Sintered Al 6061 Alloys	
A. Sinha, Z. Farhat		1
Comparison on Morphological and Opt Single-Pulse and Multi-Pulse Laser Abl	tical Properties of TiO <sub>2</sub> Thin Films Grown by ation	
Y. Peñaloza-Mendoza, L. Ponce-Cabrer	a	17
Influence of Equal Channel Angular Pre of Low Carbon Steel (Fe-0,09C-0,64Si-,	essing on Tribological Properties 26Mn)	
P. G. Mordovskoi, S. P. Yakovleva, S. N. N	1aharova	24
Surface Roughness Modification of Fre KrF Excimer Laser Treatment for Mech	e Standing Single Crystal Silicon Microstructures Using anical Performance Improvement	
M. E. Mitwally, T. Tsuchiya, O. Tabata, S.	Sedky	28
<b>Correlations of Materials Surface Prop</b>	erties with Biological Responses	
R. E. Baier		42
Experimental Adsorption and Modelisa Elborma Field in South Tunisia	ation of CO <sub>2</sub> on Adsorbents Collected from	
S. Bouzgarrou, H. Jedli, N. Stiti, N. Hamdi	, K. Slimi, M. Bagana	52

The figure on the front cover is from the article published in Journal of Surface Engineered Materials and Advanced Technology, 2015, Vol. 5, No. 1, pp. 28-41 by Mohamed Elwi Mitwally, *et al*.

#### 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, <u>www.SciRP.org</u>) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates: Print: \$79 per issue. To subscribe, please contact Journals Subscriptions Department, E-mail: <u>sub@scirp.org</u>

#### SERVICES

Advertisements Advertisement Sales Department, E-mail: <u>service@scirp.org</u>

Reprints (minimum quantity 100 copies) Reprints Co-ordinator, Scientific Research Publishing, Inc., USA. E-mail: <u>sub@scirp.org</u>

#### COPYRIGHT

#### COPYRIGHT AND REUSE RIGHTS FOR THE FRONT MATTER OF THE JOURNAL:

Copyright © 2015 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 © 2015 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



# 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

#### What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

#### What is Open Access?

Art and Design Review

Advances in

dvances in Biological

Chemistry

Entomology

Applied Mathematics

Engineering

nii () e

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



Soft

Website: http://www.scirp.org Subscription: sub@scirp.org Advertisement: service@scirp.org