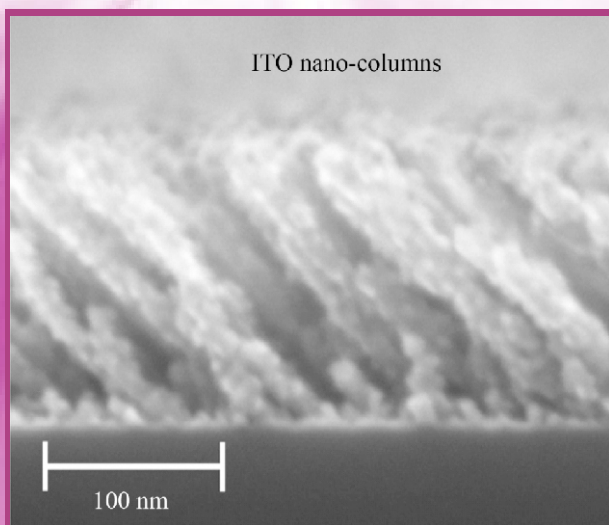
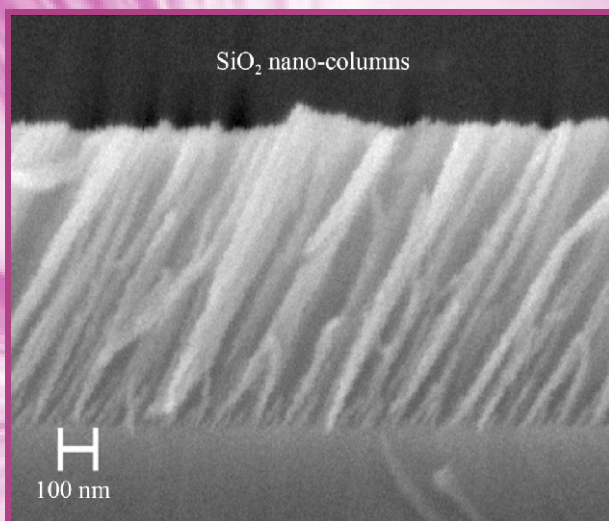


Materials Sciences and Applications



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. Alaa S. Abd-El-Aziz

University of Prince Edward Island, Canada

Prof. Samir A. Abdel-Latif

Helwan University, Egypt

Prof. Alexander Bagatur'yants

Russian Academy of Sciences, Russia

Prof. Huan-Tsung Chang

National Taiwan University, Chinese Taipei

Prof. Ram N. P. Choudhary

IIT Kharagpur, India

Prof. Rob Krams

Imperial College, UK

Prof. Athanasios G. Mamalis

National Technical University of Athens, Greece

Prof. Paolo Maria Mariano

University of Florence, Italy

Prof. Mutlu Özcan

University of Zurich, Switzerland

Prof. Chunxu Pan

Wuhan University, China

Prof. Su-Seng Pang

Louisiana State University, USA

Prof. Alessandro Pegoretti

University of Trento, Italy

Dr. Raj Pal Singh

National Chemical Laboratory, India

Prof. Anupam Srivastav

Middle East College, 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

University of Allahabad, India

Dr. Fei Zhang

Michigan State University, USA

TABLE OF CONTENTS

Volume 3 Number 9

September 2012

Effect of Radial Expansion of Cr-Mo Steel Tubes on Their Corrosion Behavior in Sea Water A. C. Seibi, P. Rostron, A. Elramady, B. Mishra, O. A. Nazer, S. Al Ameri.....	587
Fatigue Crack Growth on Double Butt Weld with Toe Crack of Pipelines Steel F. Hadjoui, M. Benachour, M. Benguediab.....	596
Equal-Channel Angular Pressing as a New Processing to Control the Microstructure and Texture of Metallic Sheets T. Xiao, H. Miyamoto, T. Uenoya.....	600
The Influence Factors Analysis to Improve the Compatibility and the Mechanical Behavior of IPN, Gradient IPN and BaTiO₃ Filled IPN Y. D. Guo, D. Y. Tang, Y. Wang.....	606
Ab Initio Study of Structural and Electronic Properties of Barium Chalcogenide Alloys M. Ameri, A. Touia, H. Khachai, Z. Mahdjoub, M. Z. Chekroun, A. Slamani.....	612
Fabrication of Sintered Diamond/Metal Composites and Evaluation of Grinding Performance for Sapphire M. Inoue, K. Yasuda, T. Ito, T. Sasahara, M. Yokota, A. Nakahira.....	619
Influence of the Fluoride Atoms Doping on the FeSe Superconductor A. D. Bortolozzo, A. D. Gueiros, L. M. S. Alves, C. A. M. dos Santos.....	624
Characterization and Electromagnetic Studies on NiZn and NiCuZn Ferrites Prepared by Microwave Sintering Technique M. P. Reddy, I. G. Kim, D. S. Yoo, W. Madhuri, N. R. Reddy, K. V. S. Kumar, R. R. Reddy.....	628
Development of Nanostructured Antireflection Coatings for EO/IR Sensor and Solar Cell Applications A. K. Sood, A. W. Sood, R. E. Welsler, G. G. Pethuraja, Y. R. Puri, X. Yan, D. J. Poxson, J. Cho, E. F. Schubert, N. K. Dhar, D. L. Polla, P. Haldar, J. L. Harvey.....	633
Ion and Gas Nitriding Applied to Steel Tool for Hot Work X38CrMoV5 Nitriding Type: Impact on the Wear Resistance S. B. Slima.....	640
Preparation of Thin Films by a Bipolar Pulsed-DC Magnetron Sputtering System Using Ca₃Co₄O₉ and CaMnO₃ Targets W. Somkhunthot, N. Pimpabute, T. Seetawan.....	645
Synthesis and Characterization of Alumina-Zirconia Powders Obtained by Sol-Gel Method: Effect of Solvent and Water Addition Rate J. Del Angel, A. F. Aguilera, I. R. Galindo, M. Martínez, T. Viveros.....	650
Poly(Vinyl Alcohol)-Infiltrated Carbon Nanotube Carpets K. G. Dassios.....	658
Synthesis and Ultrasonic Investigations of CuO-PVA Nanofluid V. Pandey, G. Mishra, S. K. Verma, M. Wan, R. R. Yadav.....	664

The figure on the front cover is from the article published in Materials Sciences and Applications, 2012, Vol. 3, No. 9, pp. 633-639 by Ashok K. Sood, *et al.*

Materials Sciences and Applications (MSA)

Journal Information

SUBSCRIPTIONS

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

Subscription rates:

Print: \$59 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

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

E-mail: sub@scirp.org

COPYRIGHT

Copyright©2012 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

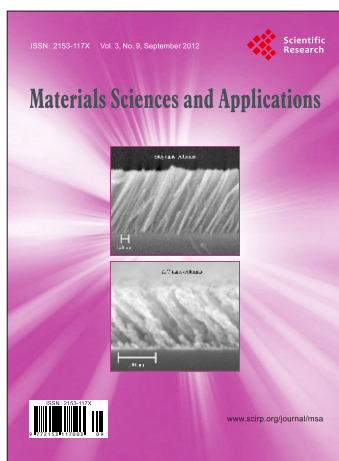
Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

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



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. Alaa S. Abd-El-Aziz

Prof. Paolo Maria Mariano

Dr. Deepak Srivastava

Prof. Samir A. Abdel-Latif

Prof. Mutlu Özcan

Prof. Gayle E. Woloschak

Prof. Alexander Bagatur'yants

Prof. Chunxu Pan

Prof. Dongfeng Xue

Prof. Huan-Tsung Chang

Prof. Su-Seng Pang

Dr. Raghvendra Singh Yadav

Prof. Ram N. P. Choudhary

Prof. Alessandro Pegoretti

Dr. Fei Zhang

Prof. Rob Krams

Dr. Raj Pal Singh

Prof. Athanasios G. Mamalis

Prof. Anupam Srivastav

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