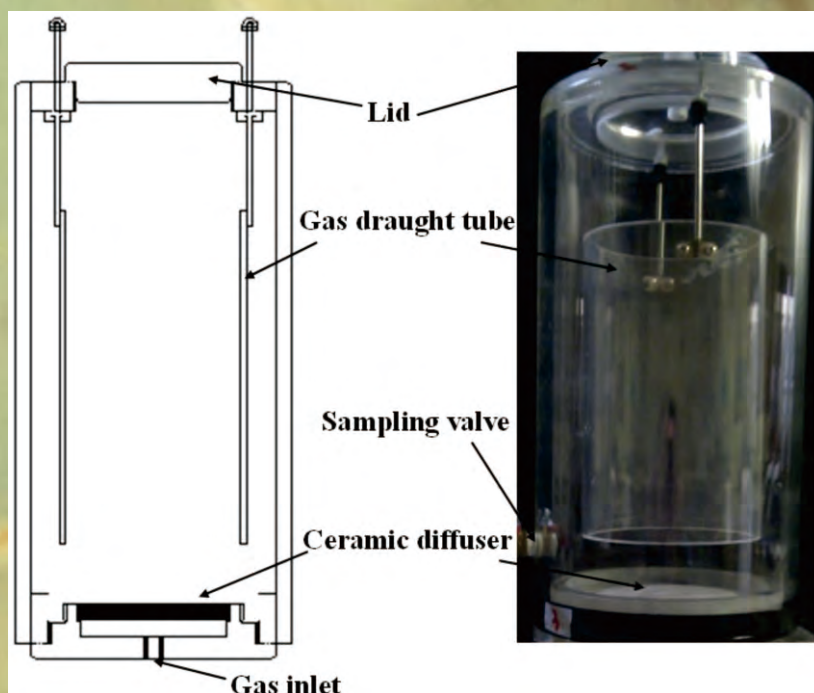




Journal of Biomaterials and Nanobiotechnology



ISSN: 2158-7027



977215870270402A

Journal Editorial Board

ISSN: 2158-7027 (Print), 2158-7043 (Online)

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

Editor-in-Chief

Dr. Bouzid Menaa

Fluorotronics, Inc., USA

Editorial Board

Prof. Adnane Abdelghani

National Institute of Applied Science and Technology, Tunisia

Prof. Michael H. Bartl

University of Utah, USA

Prof. Pierre Basmaji

Sao Paulo University, Brazil

Prof. Carlo Maria Carbonaro

University of Monserrato, Italy

Prof. Helmut Cölfen

University of Konstanz, Germany

Prof. Roman Dembinski

Oakland University, USA

Dr. Ryad Djeribi

Biofilms and Biocontamination of Materials Laboratory, Algeria

Prof. Paul Ducheyne

University of Pennsylvania, USA

Prof. Plinio Innocenzi

Università di Sassari, Italy

Prof. Ali Khademhosseini

Massachusetts Institute of Technology, USA

Prof. Beate Koksich

Free University of Berlin, Germany

Prof. Junbai Li

Chinese Academy of Sciences, China

Prof. Song Li

University of California, USA

Prof. Xiaodong Li

University of South Carolina, USA

Prof. Yang Ling

Chinese Academy of Sciences, China

Prof. Peng Liu

Lanzhou University, China

Dr. Song Liu

University of Manitoba, Canada

Prof. Jacques Livage

College de France, France

Prof. Stephen Mann

University of Bristol, UK

Prof. Wolfgang Meier

University of Basel, Switzerland

Dr. Farid Menaa

Fluorotronics, Inc., USA

Prof. Yuezhong Meng

Sun Yat-sen University, China

Prof. Enzo Montoneri

University of Turin, Italy

Prof. Yoshihiko Murakami

Tokyo University of Agriculture and Technology, Japan

Prof. Chandrabhas Narayana

Jawaharlal Nehru Centre for Advanced Scientific Research, India

Dr. Loredana Elena Nita

“Petru Poni” Institute of Macromolecular Chemistry, Romania

Prof. Faik Nuzhet Oktar

Marmara University, Turkey

Prof. Elena Parfenyuk

Russian Academy of Sciences, Russia

Prof. Christian Serre

Université de Versailles St-Quentin-en-Yvelines, France

Prof. Masahide Takahashi

Osaka Prefecture University Sakai, Japan

Prof. Maria Vallet-Regi

University Complutense of Madrid, Spain

Prof. Erwin A. Vogler

Pennsylvania State University, USA

Prof. Christian Weinand

University Hospital Cologne-Merheim, Germany

Dr. Raghvendra S. Yadav

University of Allahabad, India

Dr. Murali M. Yallapu

Sanford Research, USA

Guest Reviewers

Raghu Hegde

Yajiang Huang

Jiian-Huei Jeng

Chaoming Wang

TABLE OF CONTENTS

Volume 4 Number 2A

April 2013

Growth Enhancement of *Dunaliella salina* by Microbubble Induced Airlift Loop Bioreactor (ALB)—The Relation between Mass Transfer and Growth Rate

K. Z. Ying, D. J. Gilmour, Y. Z. Shi, W. B. Zimmerman.....1

Physicochemical Properties of Pyrolysis Bio-Oil from Sugarcane Straw and Sugarcane *in Natura*

J. A. C. Durange, M. R. L. Santos, M. M. Pereira, L. A. P. Fernandes Jr., M. N. Souza, A. N. Mendes, L. M. Mesa,
C. G. Sánchez, E. M. S. Sanchez, J. M. M. Pérez, N. M. F. Carvalho.....10

Biological Synthesis of Colloidal Gold Nanoprisms Using *Penicillium citrinum* MTCC9999

A. M. Goswami, S. Ghosh.....20

Catalytic Activity of Amino Acids-Metal Complexes in Oxidation Reactions

K. Vassilev, S. Turmanova, E. Ivanova, V. Trifonova.....28

Thiocyanate Oxidation by Coculture from a Coke Wastewater Treatment Plant

H. J. Huang, C. H. Feng, X. X. Pan, H. Z. Wu, Y. Ren, C. F. Wu, C. H. Wei.....37

The figure on the front cover is from the article published in *Journal of Biomaterials and Nanobiotechnology*, 2013, Vol. 4, No. 2A, pp. 1-9 by Kezhen Ying, *et al.*

Journal of Biomaterials and Nanobiotechnology

Journal Information

SUBSCRIPTIONS

Journal of Biomaterials and Nanobiotechnology (Online at Scientific Research Publishing, www.SciRP.org) is published quarterly 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©2013 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: jbnb@scirp.org



Journal of Biomaterials and Nanobiotechnology

ISSN: 2158-7027 (Print), 2158-7043 (Online)
<http://www.scirp.org/journal/jbnb>

Journal of Biomaterials and Nanobiotechnology is an international, interdisciplinary, English-language publication of original contributions concerning studies of the preparation, performance, and evaluation of biomaterials; the chemical, physical, toxicological, mechanical, electrochemical and optical behavior of nanostructured materials for biotechnology applications. The goal of this journal is to keep a record of the state-of-the-art research and to promote study, research and improvement within its various specialties. With an open access publication model of this journal, all interested readers around the world can freely access articles online. Now we sincerely invite you to submit your research manuscript to JBNB.

Subject Coverage

Journal of Biomaterials and Nanobiotechnology publishes original papers including but not limited to the following fields:

- Bio-encapsulation, bio-adsorption, controlled release of biomolecules (drugs, proteins, etc.), nutraceuticals
- Bio-induced nanopatterning, arrays of biological molecules, bioships
- Bio-MEMS
- Biomimetics and bio-inspired materials
- Biomolecules/surfaces interactions studies: biocompatibility of materials, biomolecules conformations, structure and dynamics at surfaces, molecular interactions, biological activity, thermodynamics and pharmacokinetics of nanostructured materials
- Development, design and synthesis of biocompatible biomaterials (sol-gel materials, glasses, ceramics, polymers, hydrogels, metal-organic frameworks, organic-inorganic hybrid materials, nanocomposites, combinations of synthetic materials and living cells and tissues, porous materials) as bulk and thin-films
- Molecular recognition techniques: biosensors
- Nanocapsules
- Nanocrystals and bio-crystallization processes
- Nanoparticles (fullerenes, carbon nanotubes, silica based nanoparticles...) as biomarkers and fluorescent tags for cell detection, imaging and drug delivery systems
- Nanostructured materials: micro- and nanofluidics
- Photo-induced species and structure conformations of biomolecules in biomaterials
- Self-assembly of biological molecules
- Theranostics and diagnostics tools: emerging techniques involved in bio-detection and analysis of individual biological molecules (imaging, spectroscopy, microscopy...)

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

Your paper should not have been previously published or be currently under consideration for publication any place else. Submit your paper electronically through the JBNB online system. All papers are subject to peer review. After your paper has been accepted, you must sign a copyright transfer agreement with JBNB. Papers accepted for publication will be available free online. A fee will be charged to cover the publication cost. Manuscripts must be written in English.

Website and E-Mail

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

E-mail: jbnb@scirp.org

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, by delivering superior scientific publications and scientific information solution provider that enable advancement in scientific research.

What is Open Access?

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, world-wide, 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



**Scientific
Research**

Website: <http://www.scirp.org>

Subscription: sub@scirp.org

Advertisement: service@scirp.org