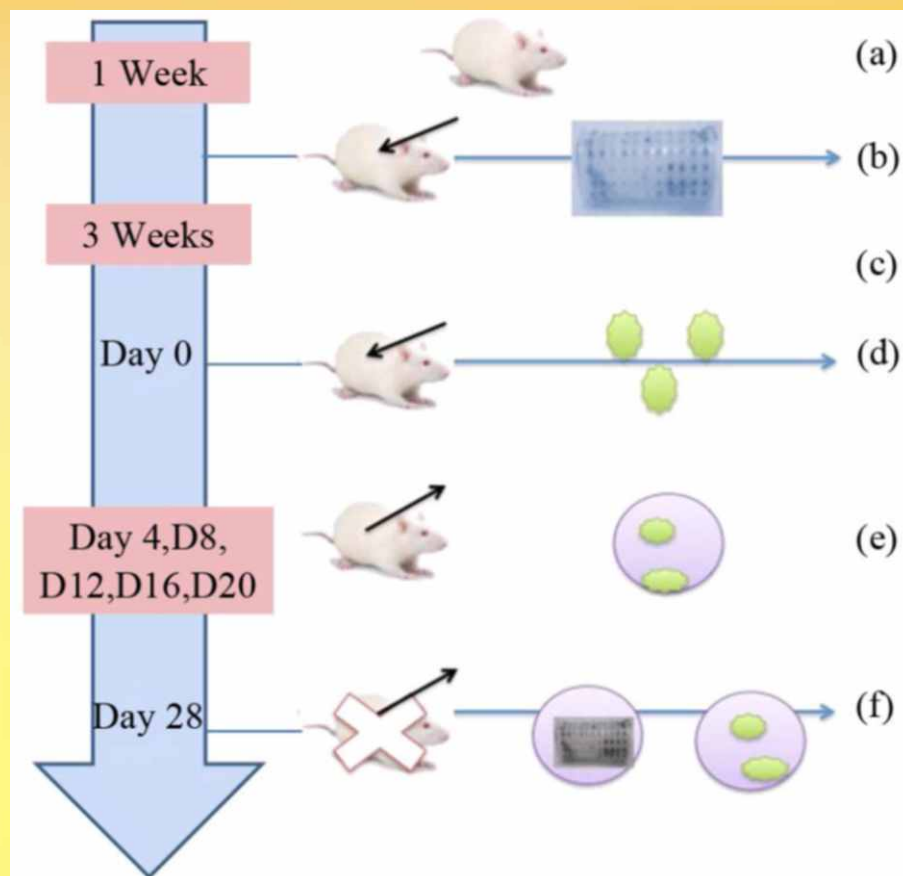


Journal of Biomaterials and Nanobiotechnology



ISSN: 2158-7027



Journal Editorial Board

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

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

Editor-in-Chief

Prof. 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
Prof. 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 Kokschi	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
Prof. 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
Prof. 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
Prof. 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. Murugan Ramalingam	Tohoku University, Japan
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
Prof. Raghvendra S. Yadav	University of Allahabad, India
Prof. Murali M. Yallapu	Sanford Research, USA

Guest Reviewers

Raghu Hegde
Yajiang Huang
Ji Jiang-Huei Jeng
Chaoming Wang

Table of Contents

Volume 7 Number 1

January 2016

Adjunction of Avidin to a Cysteamine Self-Assembled Monolayer for Impedimetric Immunosensor

O. Ouerghi, M. F. Diouani, A. Belkacem, A. Elsanousi, N. Jaffrezic-Renault.....1

Optical Sum Frequency Generation Spectroscopy of Cracked Non-Glutinous Rice (*Oryza sativa* L.) Kernels

W. Kouyama, T. Nishida, K. T. T. Hien, G. Mizutani, H. Hasegawa, H. Miyamura.....13

Mechanosynthesis as a Simple Method to Obtain a Magnetic Composite (Activated Carbon/Fe₃O₄) for Hyperthermia Treatment

J. C. Ríos-Hurtado, E. M. Múzquiz-Ramos, A. Zugasti-Cruz, D. A. Cortés-Hernández.....19

Airborne Nanoparticles Filtration by Means of Cellulose Nanofibril Based Materials

L. Alexandrescu, K. Syverud, A. Nicosia, G. Santachiara, A. Fabrizi, F. Belosi.....29

***In Vitro* Cytotoxicity Evaluation of Highly Absorbent Foam Dressings Based on Silver Zirconium Phosphate via IC₅₀ Value**

C. H. Liu, L. Hou, L. L. Liu, Z. H. Qu, X. Wang, X. X. Sun, P. Wu, Y. P. Shi.....37

Feasibility of a Chronic Foreign Body Infection Model Studying the Influence of TiO₂ Nanotube Layers on Bacterial Contamination

C. Vorilhon, C. Massard, V. Raspal, Y. Sibaud, C. Forestier, N. Charbonnel, S. Descamps, K. O. Awitor.....45

Journal of Biomaterials and Nanobiotechnology (JBNB)

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: \$79 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 AND REUSE RIGHTS FOR THE FRONT MATTER OF THE JOURNAL:

Copyright © 2016 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 © 2016 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.

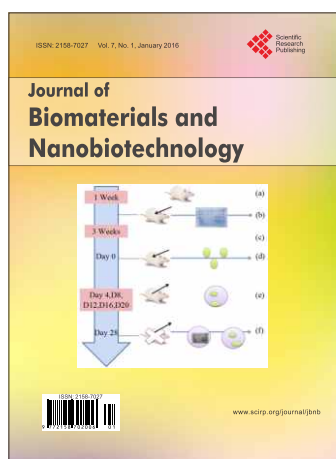
DISCLAIMER OF LIABILITY

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: 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 with its publication.

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, 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



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

Subscription: sub@scirp.org

Advertisement: service@scirp.org