

ISSN: 2158-7027 Volume 10, Number 3, July 2019



Journal of Biomaterials and Nanobiotechnology



www.scirp.org/journal/jbnb

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 |
| Dr. Zeki Candan | Istanbul University, Turkey |
| Prof. Carlo Maria Carbonaro | University of Monserrato, Italy |
| Prof. Roman Dembinski | Oakland University, USA |
| Prof. Ryad Djeribi | Biofilms and Biocontamination of Materials Laboratory, Algeria |
| Prof. Paul Ducheyne | University of Pennsylvania, USA |
| Prof. Elsayed Ahmed Elnashar | Kafrelsheikh University, Egypt |
| Prof. Alireza Heidari | California South University (CSU), USA |
| Prof. Plinio Innocenzi | Università di Sassari, Italy |
| Prof. Ali Khademhosseini | Massachusetts Institute of Technology, USA |
| Prof. Beate Koksche | 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. 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. Faik Nuzhet Oktar | Marmara University, Turkey |
| Prof. Murugan Ramalingam | Tohoku University, Japan |
| Dr. Vijayakumar Sekar | Alagappa University, India |
| Prof. Masahide Takahashi | Osaka Prefecture University Sakai, Japan |
| Prof. Anjanapura V. Raghu | JAIN Deemed-to-be University, India |
| 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 |

Table of Contents

Volume 10 Number 3

July 2019

**Osteoinduction and Osteoconduction with Porous Beta-Tricalcium Phosphate Implanted after
Fibular Resection in Humans**

T. Ariizumi, H. Kawashima, H. Hatano, T. Yamagishi, N. Oike, T. Sasaki, H. Umezu, Y. J. Xu, N. Endo,
A. Ogose.....159

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 © 2019 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 © 2019 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



**Scientific
Research
Publishing**

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

Subscription: sub@scirp.org

Advertisement: service@scirp.org