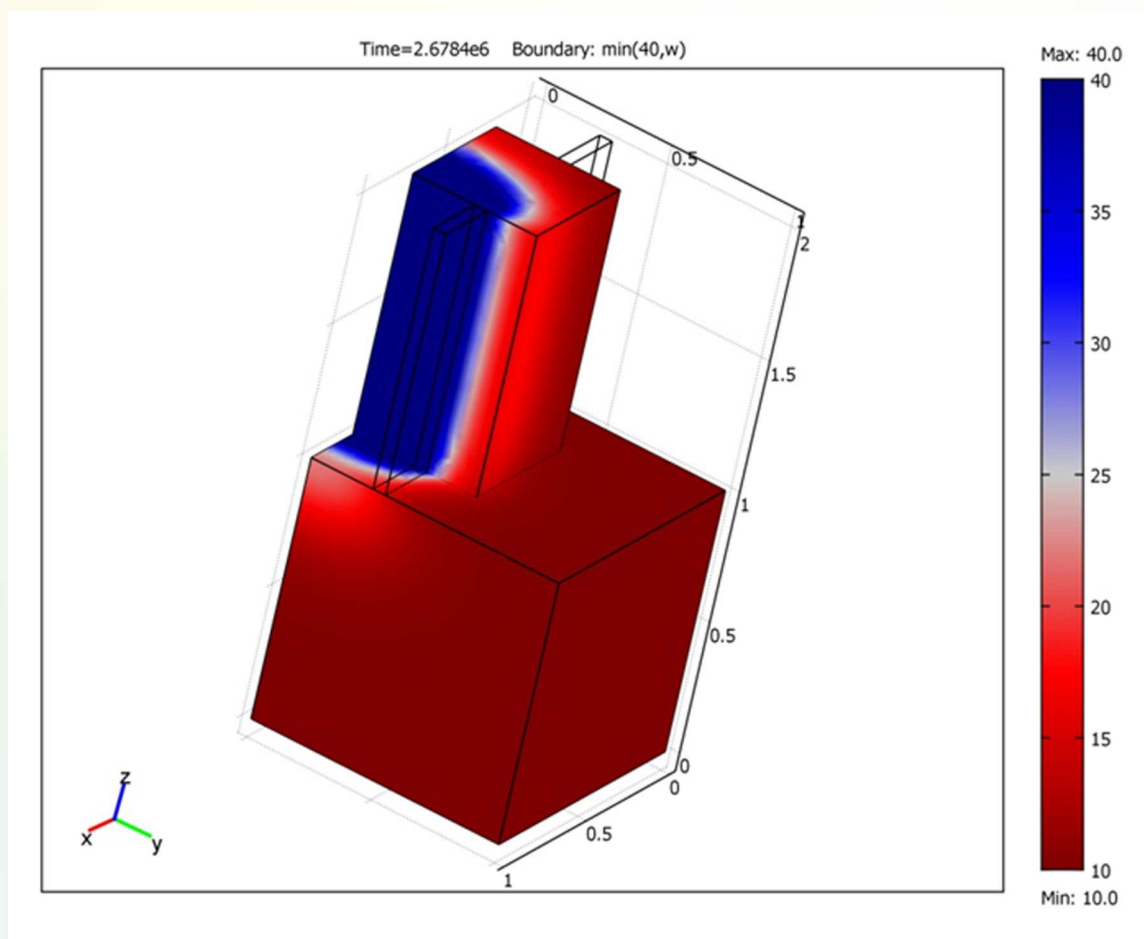


# Modeling and Numerical Simulation of Material Science



ISSN:2164-5345



# Journal Editorial Board

ISSN: 2164-5345 (Print) ISSN: 2164-5353 (Online)

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

---

## Honorary Editor in Chief

**Prof. Kiet Tieu** University of Wollongong, Australia

## Executive Editor in Chief

**Prof. Hailiang Yu** Shenyang University, China

## Editorial Board

**Dr. Jean-Pierre Badiali** Laboratoire d'Electrochimie Chimie Analytique, France

**Dr. François Barthelat** McGill University, Canada

**Prof. Giuseppe Bonifazi** Università di Roma, Italy

**Prof. Roberto Brighenti** University of Parma, Italy

**Prof. Zhenshan Cui** Shanghai Jiao Tong University, China

**Dr. Raj Das** University of Auckland, New Zealand

**Dr. Shaogang Hao** Iowa State University, USA

**Dr. Chen Huang** Los Alamos National Laboratory, USA

**Dr. Ayhan Ince** General Dynamics Land Systems, Canada

**Dr. Jinwu Kang** Tsinghua University, China

**Prof. Alexandre Ksenofontov** National Research Nuclear University, Russia

**Prof. Xianghua Liu** Northeastern University, China

**Dr. Yingtao Liu** Arizona State University, USA

**Dr. Jane Weizhen Lu** City University of Hong Kong, China

**Prof. Gilles Lubineau** COHMAS Laboratory, Saudi Arabia

**Dr. Scott T. Miller** Applied Research Laboratory at Penn State, USA

**Prof. Qing Peng** Rensselaer Polytechnic Institute, USA

**Dr. Hai Qing** Siemens Wind Power, Denmark

**Prof. Houfa Shen** Tsinghua University, China

**Prof. Ashok Srivastava** Louisiana State University, USA

**Dr. Baolin Wang** The University of New South Wales, Australia

**Dr. Huanan Yu** Washington State University, USA

**Prof. Hamit Yurtseven** Middle East Technical University, Turkey

**Prof. Shihong Zhang** Chinese Academy of Sciences, China

# Table of Contents

**Volume 5    Number 1**

**January 2015**

**Prediction of the Microstructural Variations of Cold-Worked Pure Aluminum during Annealing Process**

H. R. R. Ashtiani, P. Karami.....1

**Evaluation of Inverse Modeling Techniques for Pinpointing Water Leakages at Building Constructions**

A. W. M. van Schijndel.....15

**Prediction and Verification of Resistance Spot Welding Results of Ultra-High Strength Steels through FE Simulations**

O. Andersson, A. Melander.....26

# **Modeling and Numerical Simulation of Material Science (MNSMS)**

## **Journal Information**

### **SUBSCRIPTIONS**

The *Modeling and Numerical Simulation of Material Science* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published quarterly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$69 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **SERVICES**

#### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### **Reprints (minimum quantity 100 copies)**

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

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **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.

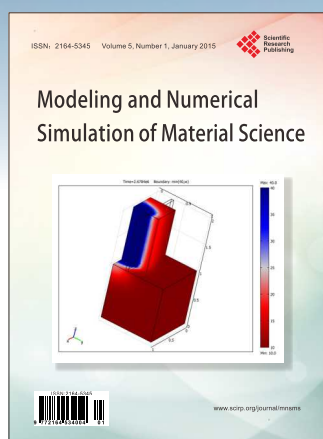
#### **DISCLAIMER OF LIABILITY**

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: [mnsms@scirp.org](mailto:mnsms@scirp.org)



# Modeling and Numerical Simulation of Material Science

ISSN 2164-5345 (print) ISSN 2164-5353 (online)

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

***Modeling and Numerical Simulation of Material Science (MNSMS)*** is an international peer-reviewed, open access journal publishing in English original research studies, reviews and case reports in all aspects of Material Science. Symposia or workshop papers may be published as supplements.

## Honorary Editor in Chief

**Prof. Kiet Tieu**

**University of Wollongong, Australia**

## Executive Editor in Chief

**Prof. Hailiang Yu**

**Shenyang University, China**

## Subject Coverage

All the manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copies. The journal publishes original papers including but not limited to the following fields:

- Application of modeling and numerical simulation methods in analysis of solidification, forming, welding, heat treatment, surface engineering, process of materials, include, ferrous metals and alloys, non-ferrous metals and alloys, biomaterials, carbons, ceramic materials, polymer, composites, and other advanced materials.
- New development of modeling and numerical simulations methods for analysis material processes, such as finite element method, finite difference method, boundary element method, slab method, crystal finite element method, CA, MD, statistical methods, artificial intelligence method.

## 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/mnsms>

**E-mail: [mnsms@scirp.org](mailto:mnsms@scirp.org)**

