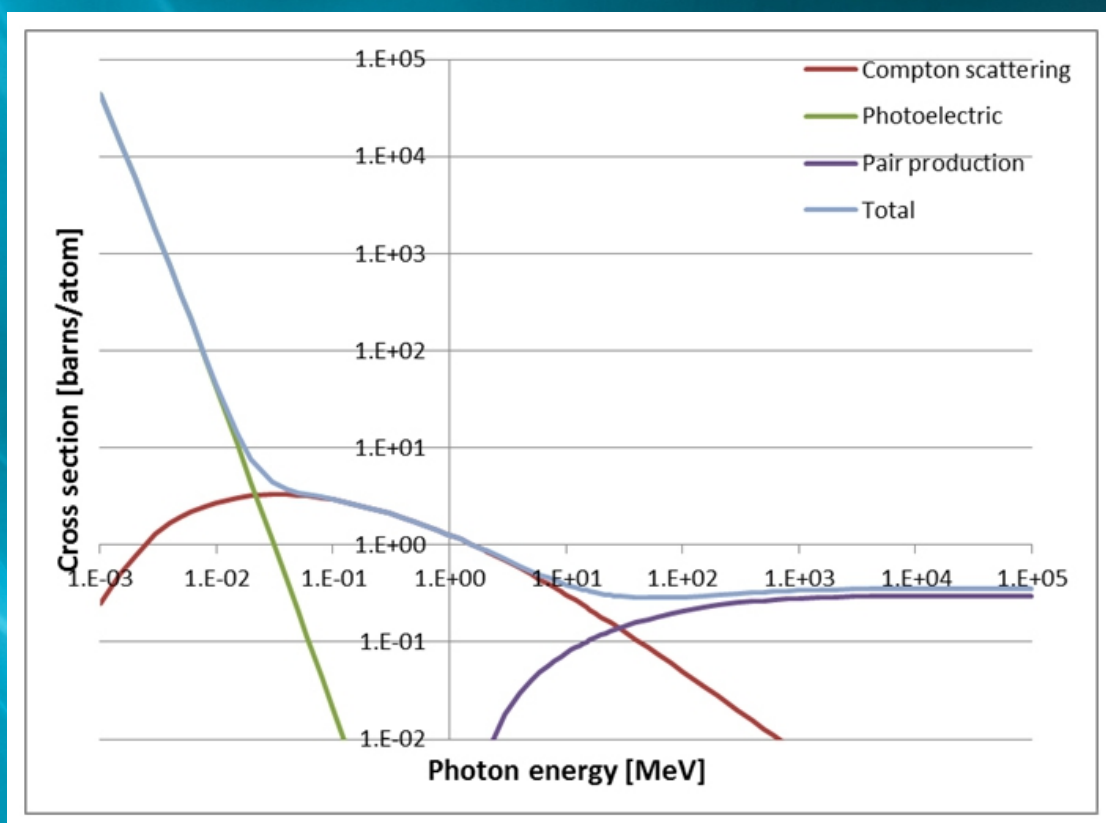




World Journal of Mechanics



ISSN: 2160-049X



Journal Editorial Board

ISSN 2160-049X (Print) ISSN 2160-0503 (Online)

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

Editors-in-Chief

Prof. Dan Mateescu

McGill University, Canada

Prof. Kumar K. Tamma

University of Minnesota, USA

Editorial Board (According to Alphabet)

Prof. Ramesh K. Agarwal

Washington University in St. Louis, USA

Prof. Nurullah Arslan

Fatih University, Turkey

Dr. Tommaso Astarita

University of Naples, Italy

Prof. Jan Awrejcewicz

The Technical University of Lodz, Poland

Prof. Joao Bernardo Lares Moreira de Campos

The University of Porto, Portugal

Prof. Ismail Celik

West Virginia University, USA

Prof. Jin-Rae Cho

Pusan National University, South Korea

Prof. Huashu Dou

Zhejiang Sci-Tech University, China

Prof. Igor Emri

California Institute of Technology, USA

Prof. Victor A. Eremeyev

Martin Luther University of Halle-Wittenberg, Germany

Dr. Xiaosheng Gao

The University of Akron, USA

Prof. Sachin Goyal

University of California, USA

Prof. Nguyen Dang Hung

University of Liege, Belgium

Prof. Ilya G. Kaplan

National Autonomous University of Mexico, Mexico

Dr. Semih Kucukarslan

Istanbul Technical University, Turkey

Prof. Anjan Kundu

Saha Institute of Nuclear Physics, India

Prof. Tadeusz Lagoda

Opole University of Technology, Poland

Prof. Sanboh Lee

National Tsing Hua University, Chinese Taipei

Prof. Xiaodong Li

University of South Carolina, USA

Dr. Jianlin Liu

China University of Petroleum (Huadong), China

Prof. Giulio Lorenzini

University of Parma, Italy

Prof. Antonio Ferreira Miguel

University of Evora, Portugal

Dr. Rostand Moutou-Pitti

Blaise Pascal University, France

Dr. Rafael Pacheco

Arizona State University, USA

Prof. Christopher G. Provatidis

National Technical University of Athens, Greece

Prof. Richard Saurel

Aix Marseille University, France

Prof. Fulin Shang

Xi'an Jiaotong University, China

Prof. David S.-K. Ting

University of Windsor, Canada

Prof. Qiang Xue

Civil and Hydraulic Engineering and Information Technology Research
Center, Chinese Taipei

Prof. Ruey-Jen Yang

National Cheng Kung University, Chinese Taipei

Prof. Duyi Ye

Zhejiang University, China

Table of Contents

Volume 4 Number 3

March 2014

New Materials for Vacuum Chambers in High Energy Physics

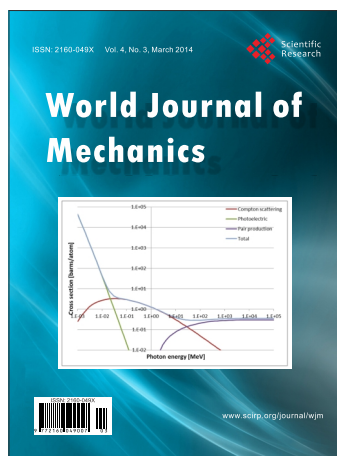
C. Garion.....71

Mechanical Properties for Reliability Analysis of Structures in Glassy Carbon

C. Garion79

Development and Flow Modes of Vertical Taylor-Couette System with Free Surface

T. Watanabe, Y. Toya, S. Hara.....90



Call for Papers

World Journal of Mechanics (WJM)

ISSN 2160-049X (Print) ISSN 2160-0503 (Online)

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

World Journal of Mechanics (WJM) is an international peer-reviewed journal dedicated to presenting the English original research studies, reviews in the general field of mechanics including the mechanics of solids, structures and fluids and their interaction.

Subject Coverage

This journal invites original research and review papers that address the following issues. Topics of interest include, but are not limited to:

- Applied Mathematics and Mechanics
- Biomechanics and Modeling in Mechanobiology
- Celestial Mechanics and Dynamical Astronomy
- Classical and Quantum Aspects of Mechanics
- Computational Mechanics
- Computer Methods in Applied Mechanics and Engineering
- Continuum Mechanics and Thermodynamics
- Damage Mechanics
- Dynamics and Vibration Control
- Elasticity and Plasticity
- Engineering Fracture Mechanics
- Environmental Fluid Mechanics
- Experimental Mechanics
- Fluid Mechanics and Aerodynamics
- Mathematical Fluid Mechanics
- Mathematics and Mechanics of Solids
- Mechanical Behavior of Biomedical Materials
- Mechanical Engineering Science
- Mechanical Systems and Signal Processing
- Mechanics & Astronomy
- Mechanics and Materials in Design
- Mechanics in Medicine and Biology
- Mechanics of Materials
- Mechanics of Time-Dependent Materials
- Microfluidics
- Micromechanics and Microengineering
- Multi-Scale Mechanics
- Nanomechanics
- Non-Linear Mechanics
- Non-Newtonian Fluid Mechanics
- Numerical and Analytical Methods in Geomechanics
- Probabilistic Engineering Mechanics
- Rock Mechanics and Mining Sciences
- Solid and Structural Mechanics
- Statistical Mechanics and Its Applications
- Terramechanics
- Theoretical and Applied Fracture Mechanics
- Thermophysics and Aeromechanics
- Thin Film Mechanics
- Viscoelasticity

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of World Journal of Mechanics.

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/wjm>

E-mail: wjm@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

World Journal of Mechanics (WJM)

Journal Information

SUBSCRIPTIONS

The *World Journal of Mechanics* (Online at Scientific Research Publishing, www.SciRP.org) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$69 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 © 2014 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 © 2014 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: wjm@scirp.org