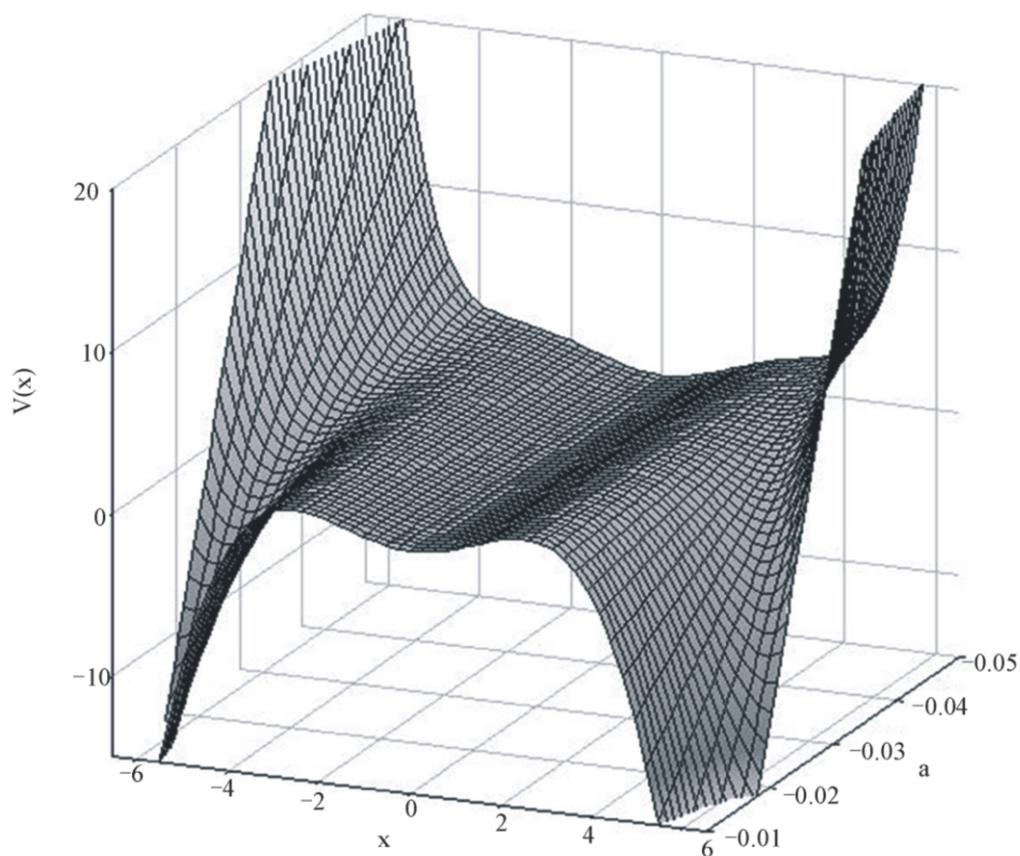


Journal of Modern Physics



ISSN: 2153-1196



Journal Editorial Board

ISSN: 2153-1196 (Print) ISSN: 2153-120X (Online)

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

Editor-in-Chief

Prof. Victor Yashnikov Russian Academy of Sciences, Russia

Executive-Editor in-Chief

Dr. Marko Markov Research International, Buffalo Office, USA

Editorial Board

Prof. Sadhan Kumar Adhikari Universidade Estadual Paulista, Brazil
Prof. Sami M. AL-Jaber AN-Najah National University, Palestine
Dr. Ksenofontov Alexandre Moscow Engineering Physics Institute, Russia
Prof. Roberto Oscar Aquilano Universidad Nacional de Rosario, Argentina
Prof. Salvatore Capozziello University of Naples "Federico II", Italy
Dr. Riccardo Cerulli Gran Sasso National Laboratory, INFN, Italy
Prof. Papadopoulos Demetrios Aristotle University of Thessaloniki, Greece
Dr. Hua-Shu Dou National University of Singapore, Singapore
Prof. Constantin Fetecau Government College University, Romania
Prof. Bouzid Mena Fluorotronics, Inc., USA
Prof. Karo Michaelian National Autonomous University of Mexico, Mexico
Prof. Zdzislaw E. Musielak The University of Texas at Arlington, USA
Prof. Luciano Nunziante University of Naples Federico II, Italy
Prof. Richard Saurel University Aix Marseille I, France
Prof. Magnus Willander Linköping University, Sweden
Dr. Raghvendra Singh Yadav University of Allahabad, India
Dr. S. Zerbini University of Trento, Italy

Managing Executive Editor

Prof. Chang Liu Wuhan University, China Email: cliu@acc-lab.whu.edu.cn

Editorial Assistant

Shirley Zhou Scientific Research Publishing, USA Email: jmp@scirp.org

TABLE OF CONTENTS

Volume 2 Number 8

August 2011

Control of Threshold and Gain of Parametric Amplification in Magnetoactive III-V Piezoelectric Semiconductors

B. Lal, P. Aghamkar.....771

Angular Distribution of Photoelectrons during Irradiation of Metal Surface by Electromagnetic Waves

A. N. Volobuev, E. S. Petrov.....780

Spin Dependent Selection Rules for Photonic Transitions in Hydrogen-Like Atoms

Z. Saglam, M. Saglam.....787

Neutrino Masses in Supersymmetric Economical $SU(3)_C \otimes SU(3)_L \otimes U(1)_X$ Model

P. V. Dong, D. T. Huong, M. C. Rodriguez, H. N. Long.....792

Cosmic Transmutation Conjecture

P. F. González-Díaz.....803

First Principle Study of Cubic SrMO₃ Perovskites (M = Ti, Zr, Mo, Rh, Ru)

A. Daga, S. Sharma, K. S. Sharma.....812

Early-Universe and Evolution of the Present Universe: Exact Solution Models

K. M. Singh, T. J. Singh, K. P. Singh.....817

Light-Front Hamiltonian and Path Integral Formulations of the Conformally Gauge-Fixed

Polyakov D1 Brane Action with a Scalar Dilation Field

U. Kulshreshtha, D. S. Kulshreshtha.....826

The Cosmological Evolution of Baryonic Matter's Density Perturbations under Influence of the Quintessence

C. L. Mikhajlovich.....834

Peculiarities of Radiation Effects in MgO:Mn²⁺ Crystals

M. Abramishvili, Z. Akhvlediani, M. Galustashvili, G. Dekanozishvili, T. Kalabegishvili, V. Kvatchadze, V. Tavkheldze.....841

Prospects of Carbyne Applications in Microelectronics

Y. Prazdnikov.....845

Formulae for Energy and Momentum of Relativistic Particle Regular at Zero-Mass State

R. M. Yamaleev.....849

Structural and Electronic Properties of Impurities on Boron Nitride Nanotube

G. P. Soares, S. Guerini.....857

Study of Sputtered Fe/t_{Si}/Fe Trilayer Films: Magnetic and Electronic Properties

R. Brajpuriya, R. K. Sharma, A. Vij, T. Shripathi.....864

Microstructural Morphological Changes in Laser Irradiated Platinum

A. Latif, M. Khaleeq-ur-Rahman, K. A. Bhatti, M. S. Rafique, A. Hayat.....875

Model of Preformed Hole-Pairs in Cuprate Superconductors

R. J. Singh.....885

Coupling Interactions and Trapped Effects for a Triple-Well Potential

S. Aydın, M. Şimşek.....898

Electromagneto-Optical Scanning of the Magnetic Domains Local Areas of Bismuth-Substituted Yttrium Iron Garnets

V. E. Koronovskyy, A. A. Kalenichenko.....908

Optical Properties and Activation Energy of a Novel System of CdTe Nanoparticles Embedded in Phosphate Glass Matrix

S. Wageh, A. A. Higazy, M. A. Algrade913

Alkaline Earth (Ca) and Transition Metal (Ni) Doping on the Transport Properties of

$Y_{1-x}Ca_xBa_2(Cu_{1-y}Ni_y)_3O_{7-\delta}$ Superconductors

D. Varshney, A. Yogi, N. Dodiya, I. Mansuri922

The figure on the front cover is from the article published in *Journal of Modern Physics*, 2011, Vol. 2, No. 8, pp. 898-907 by Sezgin Aydın and Mehmet Şimşek.

Journal of Modern Physics (JMP)

Journal Information

SUBSCRIPTIONS

The *Journal of Modern Physics* (Online at Scientific Research Publishing, www.SciRP.org) is published monthly 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©2011 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.

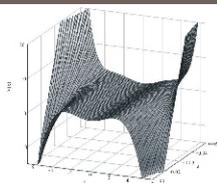
Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

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: jmp@scirp.org



Journal of Modern Physics

ISSN Print: 2153-1196 ISSN Online: 2153-120X

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

Journal of Modern Physics(JMP) is an international journal dedicated to the latest advancement of modern physics. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of modern physics.

Editor-in-Chief

Prof. Victor Yashnikov

Russian Academy of Sciences, Russia

Executive-Editor-in-Chief

Dr. Marko Markov

Research International, Buffalo Office, USA

Editorial Board

Prof. Sadhan Kumar Adhikari
 Prof. Sami M. AL-Jaber
 Dr. Ksenofontov Alexandre
 Prof. Roberto Oscar Aquilano
 Prof. Salvatore Capozziello
 Dr. Riccardo Cerulli
 Prof. Papadopoulos Demetrios
 Dr. Hua-Shu Dou
 Prof. Constantin Fetecua
 Prof. Bouzid Menaâ
 Prof. Karo Michaelian
 Prof. Zdzislaw E. Musielak
 Prof. Luciano Nunziante
 Prof. Jingli Ren
 Prof. Richard Saurel
 Prof. Magnus Willander
 Dr. Raghvendra Singh Yadav
 Dr. S. Zerbini

Universidade Estadual Paulista, Brazil
 AN-Najah National University, Palestine
 Moscow Engineering Physics Institute, Russia
 Universidad Nacional de Rosario, Argentina
 University of Naples "Federico II", Italy
 Gran Sasso National Laboratory, INFN, Italy
 Aristotle University of Thessaloniki, Greece
 National University of Singapore, Singapore
 Government College University, Romania
 Fluorotronics, Inc., USA
 National Autonomous University of Mexico, Mexico
 The University of Texas at Arlington, USA
 University of Naples Federico II, Italy
 Zhengzhou University, China
 University Aix Marseille I, France
 Linköping University, Sweden
 University of Allahabad, India
 University of Trento, Italy

Managing Executive Editor

Prof. Chang Liu

Wuhan University, China

Email: cliu@acc-lab.whu.edu.cn

Subject Coverage

Journal of Modern Physics publishes original papers including but not limited to the following fields:

Theoretical High Energy Physics
Biophysics and Medical Physics
Earth and Planetary Sciences
Instrumentation and Measurement
Plasma Physics

Materials Sciences and Technology
Nuclear Science and Engineering
Computational Physics
Interdisciplinary Physics
Other Topics in Physics

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

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/jmp>

E-mail: jmp@scirp.org