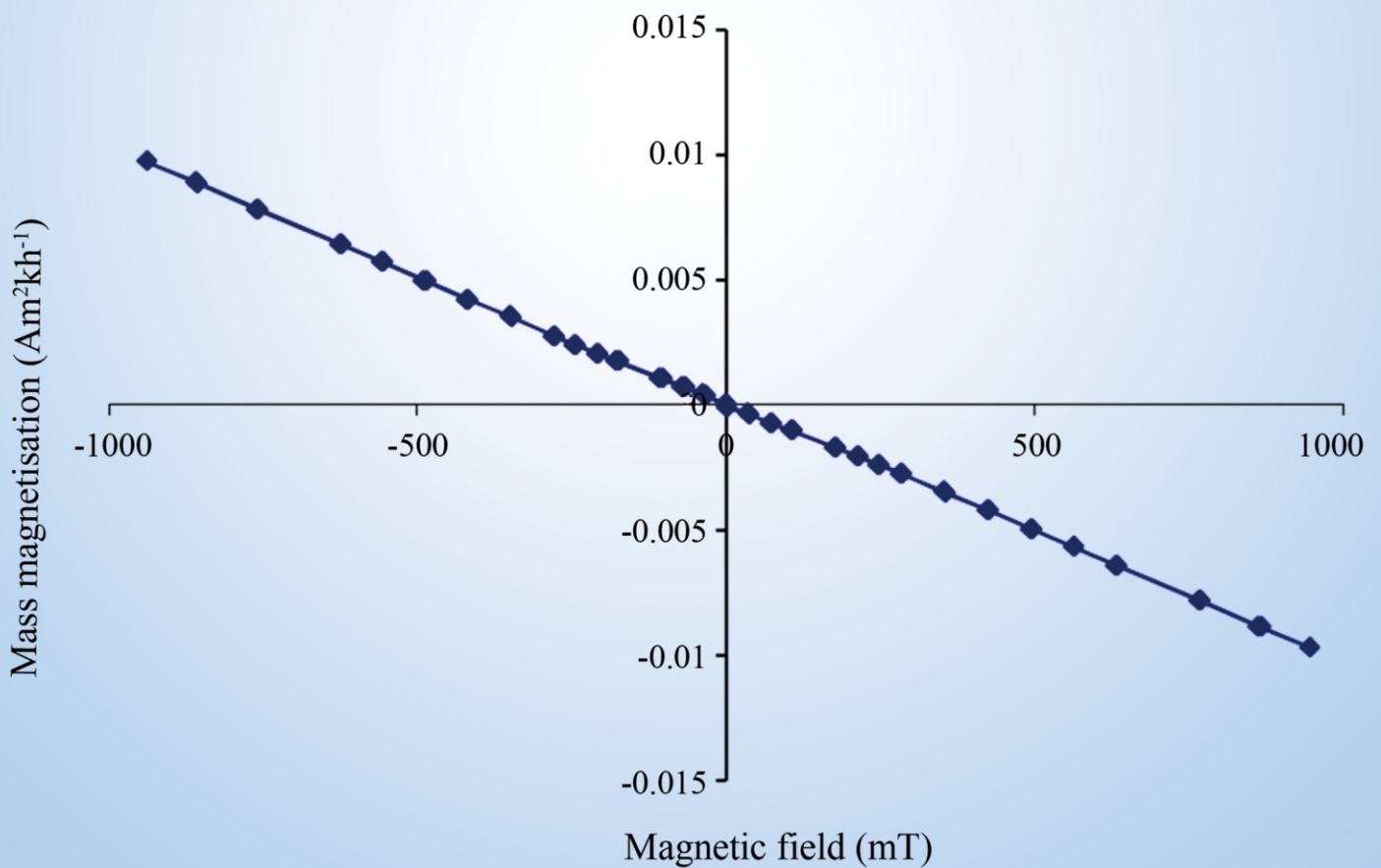


# Journal of Modern Physics



# Journal Editorial Board

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

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

---

## Editor-in-Chief

Prof. Yang-Hui He

City University, UK

## Executive Editor-in-Chief

Prof. Marko Markov

Research International, Buffalo Office, USA

## Managing Executive Editor

Prof. Chang Liu

Wuhan University, China

## Editorial Board

Prof. Nikolai A. Sobolev

Universidade de Aveiro, Portugal

Prof. Yohannes Abate

California State University, USA

Dr. Mohamed Abu-Shady

Menoufia University, Egypt

Dr. Hamid Alemohammad

Advanced Test and Automation Inc., Canada

Prof. Emad K. Al-Shakarchi

Al-Nahrain University, Iraq

Prof. Changle Chen

University of Science and Technology of China, China

Prof. Stephen Robert Cotanch

NC State University, USA

Prof. Sharmanthie Fernando

Northern Kentucky University, USA

Prof. Ju Gao

The University of Hong Kong, China

Prof. Sachin Goyal

University of California, USA

Dr. Wei Guo

Florida State University, USA

Prof. Alioscia Hamma

Tsinghua University, China

Prof. Cosmin Ilie

Los Alamos National Laboratory, USA

Prof. Haikel Jelassi

National Center for Nuclear Science and Technology, Tunisia

Prof. Preston B. Landon

The University of California, USA

Prof. Chunlei Liu

Carnegie Mellon University, USA

Prof. Christophe J. Muller

University of Provence, France

Prof. Ambarish Nag

National Renewable Energy Laboratory, USA

Dr. Rada Novakovic

National Research Council, Italy

Prof. Valery Obukhov

Tomsk State Pedagogical University, Russia

Prof. Tongfei Qi

University of Kentucky, USA

Prof. Richard Saurel

University of Aix Marseille I, France

Prof. Alejandro Crespo Sosa

Universidad Nacional Autónoma de México, Mexico

Prof. Bo Sun

Oregon State University, USA

Prof. Mingzhai Sun

Ohio State University, USA

Dr. Sergei K. Suslov

Arizona State University, USA

Dr. A. L. Roy Vellaisamy

City University of Hong Kong, China

Prof. Yuan Wang

University of California, Berkeley, USA

Prof. Fan Yang

Fermi National Accelerator Laboratory, USA

Prof. Peter H. Yoon

University of Maryland, USA

Dr. S. Zerbini

University of Trento, Italy

Prof. Meishan Zhao

University of Chicago, USA

Prof. Pavel Zhuravlev

University of Maryland at College Park, USA

# Table of Contents

**Volume 8    Number 7**

**June 2017**

<b>Diamagnetic Behavior in Nanoparticle Hematite?</b>	
P. A. Petrov, A. Ali, D. K. Potter.....	1013
<b>Anti-Fowler Temperature Regime in Photoemission from <i>n</i>-Type Semiconductors with Surface Accumulation Layer</b>	
M. Molotskii, K. Shimanovich, Y. Rosenwaks.....	1020
<b>Formation of Slow Electron Pairs in an External Coulomb Field</b>	
H. Klar.....	1029
<b>Relativistic Formulae for the Biquaternionic Model of Electro-Gravimagnetic Charges and Currents</b>	
L. Alexeyeva.....	1043
<b>Intrinsic Particle Charges and the Strong Force</b>	
B. Lehnert.....	1053
<b>An Extended Version of Hubble’s Law</b>	
G. A. Ramanujam, K. Fitzcharles, S. Muralidharan.....	1067
<b>“Electrical” and “Magnetic” Worlds in Universe</b>	
R. A. Sizov.....	1072
<b>Black Holes or Dark Stars—What Follows from the General Relativity Theory</b>	
V. V. Vasiliev.....	1087
<b>A Combined Heterotic String and Kähler Manifold Elucidation of Ordinary Energy, Dark Matter, Olbers’s Paradox and Pure Dark Energy Density of the Cosmos</b>	
M. S. El Naschie.....	1101
<b>The Advanced Solution for Mission of Complexity</b>	
D. Cha.....	1119

# Journal of Modern Physics (JMP)

## Journal Information

### SUBSCRIPTIONS

The *Journal of Modern Physics* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published monthly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$89 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 © 2017 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 © 2017 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.

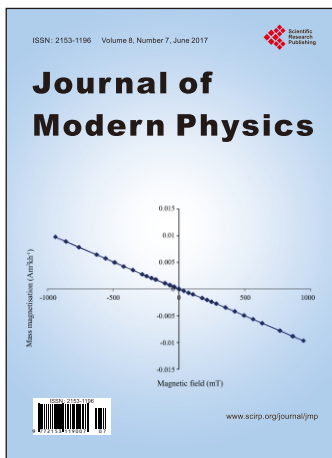
#### **Disclaimer of liability**

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



## Call for Papers

# Journal of Modern Physics

ISSN: 2153-1196 (Print)    ISSN: 2153-120X (Online)  
<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. Yang-Hui He

City University, UK

## Executive Editor-in-Chief

Prof. Marko Markov

Research International, Buffalo Office, USA

## Subject Coverage

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

Biophysics and Medical Physics  
Complex Systems Physics  
Computational Physics  
Condensed Matter Physics  
Cosmology and Early Universe  
Earth and Planetary Sciences  
General Relativity  
High Energy Astrophysics  
High Energy/Accelerator Physics  
Instrumentation and Measurement  
Interdisciplinary Physics  
Materials Sciences and Technology  
Mathematical Physics  
Mechanical Response of Solids and Structures

New Materials: Micro and Nano-Mechanics and Homogeneization  
Non-Equilibrium Thermodynamics and Statistical Mechanics  
Nuclear Science and Engineering  
Optics  
Physics of Nanostructures  
Plasma Physics  
Quantum Mechanical Developments  
Quantum Theory  
Relativistic Astrophysics  
String Theory  
Superconducting Physics  
Theoretical High Energy Physics  
Thermology

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](mailto:jmp@scirp.org)

