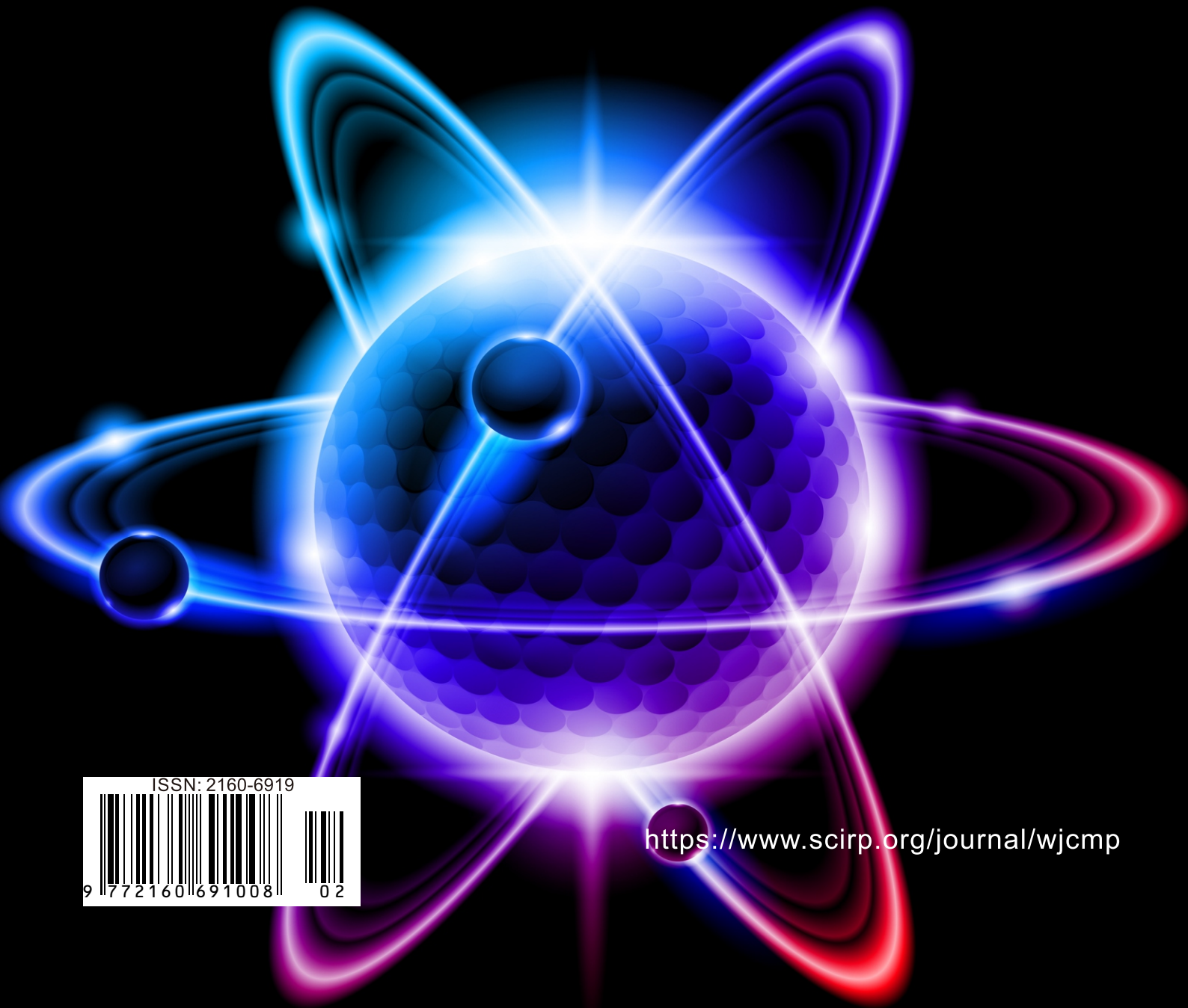


ISSN: 2160-6919 Volume 10, Number 2, May 2020



# World Journal of Condensed Matter Physics



<https://www.scirp.org/journal/wjcmp>

# Journal Editorial Board

ISSN: 2160-6919 (Print)      ISSN: 2160-6927 (Online)

<https://www.scirp.org/journal/wjcmp>

---

## Editor-in-Chief

**Prof. Wen-Jeng Hsueh**

National Taiwan University, Chinese Taipei

## Editorial Board

**Dr. Gulmurza Abdurakhmanov**

Academy of Sciences of Uzbekistan, Uzbekistan

**Prof. Maksimenko Sergey Afanasievich**

Belarus State University, Belarus

**Prof. Serdar Altin**

Inonu University, Turkey

**Prof. S. Balamurugan**

Noorul Islam Centre for Higher Education (NICHE), India

**Prof. Achim Bittner**

Vienna University of Technology, Austria

**Prof. Christian Brosseau**

Université de Bretagne Occidentale, France

**Prof. Luigi Maxmilian Caligiuri**

University of Calabria, Italy

**Prof. Laurie E. Calvet**

Université de Paris-Sud, France

**Prof. Xinmin Cao**

Xunlight Corporation, USA

**Prof. Dinko Vassilev Chakarov**

Chalmers University of Technology, Sweden

**Dr. Kah-Yoong Chan**

Multimedia University, Malaysia

**Prof. Jian Chen**

Sun Yat-sen University, China

**Dr. Carmelo Corsaro**

University of Messina, Italy

**Dr. Nishad G. Deshpande**

Shivaji University, India

**Prof. Bishwajyoti Dey**

University of Pune, India

**Prof. Fayçal Djéffal**

University of Batna, Algeria

**Prof. Aswini Ghosh**

Indian Association for the Cultivation of Science, India

**Prof. Pimo He**

Zhejiang University, China

**Dr. Joseph Horvat**

University of Wollongong, Australia

**Prof. Rakesh Kumar Joshi**

Jawaharlal Nehru University, India

**Prof. Vassilios Karavolas**

University of Indianapolis, Athens Campus, Greece

**Prof. Sambasiva Rao Konapala**

Andhra University, India

**Prof. Olga Korostynska**

Dublin Institute of Technology, Ireland

**Dr. Aleksander Krupski**

University of Warwick, UK

**Prof. Tankeshwar Kumar**

Panjab University, India

**Prof. Pui-Tak Leung**

Portland State University, USA

**Prof. Feng-Ming Li**

Harbin Institute of Technology, China

**Dr. K. Maaz**

Sungkyunkwan University, South Korea

**Prof. Biswanath Mallik**

Indian Association for the Cultivation of Science, India

**Prof. Li-Jian Meng**

Instituto Superior de Engenharia do Porto, Portugal

**Prof. Thanos Mitrelias**

University of Cambridge, UK

**Prof. Alexander M. Panich**

Ben-Gurion University of the Negev, Israel

**Dr. Aswini K. Pradhan**

Norfolk State University, USA

**Prof. Sergo Sh. Rekhviashvili**

Institute of Applied Mathematics and Automation KBSC RAS, Russia

**Prof. Samar K. Saha**

Santa Clara University, USA

**Prof. Dsc Oleg Shevaleevskiy**

Russian Academy of Sciences, Russia

**Dr. Nikolai A. Sobolev**

University of Aveiro, Portugal

**Prof. Bibhu Prasad Swain**

National Institute of Advanced Industrial Science and Technology, Japan

**Prof. Roland H. Tarkhanyan**

National AcSci of Armenia, Armenia

**Prof. Ajay Singh Verma**

Panjab University, India

**Prof. Jiagang Wu**

Sichuan University, China

**Prof. Fahrettin Yakuphanoglu**

Firat University, Turkey

**Prof. Renyun Zhang**

Mid Sweden University, Sweden

**Prof. Zhiyong Zhong**

University of Electronic Science and Technology of China, China

# Table of Contents

**Volume 10    Number 2**

**May 2020**

## **Quantum Curie-Weiss Magnet Induced by Violation of Cluster Property**

T. Munehisa.....27

## **A Fermi Energy-Incorporated Framework for Dealing with the Temperature- and Magnetic Field-Dependent Critical Current Densities of Superconductors and Its Application to Bi-2212**

G. P. Malik, V. S. Varma.....53

## **Induced Hall-Like Current by Acoustic Phonons in Semiconductor Fluorinated Carbon Nanotube**

D. Sakyi-Arthur, S. Y. Mensah, K. W. Adu, K. A. Dompok, R. Edziah, N. G. Mensah, C. Jebuni-Adanu.....71

## **Just a Bit of Physics Can Tell So Much: A Unique Story of the Start of the Earth-Moon System**

F. J. Cadieu.....88

# World Journal of Condensed Matter Physics (WJCMP)

## Journal Information

### SUBSCRIPTIONS

The *World Journal of Condensed Matter Physics* (Online at Scientific Research Publishing, <https://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](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 © 2020 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 © 2020 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

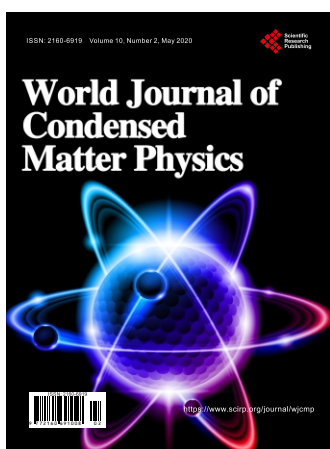
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any 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: [wjcmp@scirp.org](mailto:wjcmp@scirp.org)





# World Journal of Condensed Matter Physics (WJCMP)

ISSN 2160-6919 (print) ISSN 2160-6927 (online)  
<https://www.scirp.org/journal/wjcmp>

**World Journal of Condensed Matter Physics (WJCMP)** covers the whole of condensed matter physics including soft condensed matter and nanostructures. Papers may report experimental, theoretical and simulation studies. Note that papers must contain fundamental condensed matter science: papers reporting methods of materials preparation or properties of materials without novel condensed matter content will not be accepted.

## Editor-in-Chief

Prof. Wen-Jeng Hsueh

National Taiwan University, Chinese Taipei

## Editorial Board

Dr. Gulmurza Abdurakhmanov  
Prof. Maksimenko Sergey Afanasievich  
Prof. Serdar Altin  
Prof. S. Balamurugan  
Prof. Achim Bittner  
Prof. Christian Brosseau  
Prof. Luigi Maxmilian Caligiuri  
Prof. Laurie E. Calvet  
Prof. Xinmin Cao  
Prof. Dinko Vassilev Chakarov  
Dr. Kah-Yoong Chan  
Prof. Jian Chen  
Dr. Carmelo Corsaro  
Dr. Nishad G. Deshpande  
Prof. Bishwajyoti Dey

Prof. Fayçal Djeflal  
Prof. Aswini Ghosh  
Prof. Pimo He  
Dr. Joseph Horvat  
Prof. Rakesh Kumar Joshi  
Prof. Vassilios Karavolas  
Prof. Sambasiva Rao Konapala  
Prof. Olga Korostynska  
Dr. Aleksander Krupski  
Prof. Tankeshwar Kumar  
Prof. Pui-Tak Leung  
Prof. Feng-Ming Li  
Dr. K. Maaz  
Prof. Biswanath Mallik  
Prof. Li-Jian Meng

Prof. Thanos Mitrelas  
Prof. Alexander M. Panich  
Dr. Aswini K. Pradhan  
Prof. Sergo Sh. Rekhviashvili  
Prof. Samar K. Saha  
Prof. Dsc Oleg Shevaleevskiy  
Dr. Nikolai A. Sobolev  
Prof. Bibhu Prasad Swain  
Prof. Roland H. Tarkhanyan  
Prof. Ajay Singh Verma  
Prof. Jiagang Wu  
Prof. Fahrettin Yakuphanoglu  
Prof. Renyun Zhang  
Prof. Zhiyong Zhong

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:

Correlated Electrons  
Dielectrics and Ferroelectrics  
Electronic Structure  
Liquids, Soft Matter and Biological Physics  
Magnetism and Magnetic Materials  
Nanostructures and Nanoelectronics  
Semiconductors  
Solid Structure and Lattice Dynamics  
Superconductors and Metals  
Surface, Interface and Atomic-Scale Science

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 the WJCMP.

## Website and E-Mail

<https://www.scirp.org/journal/wjcmp>

E-Mail: [wjcmp@scirp.org](mailto:wjcmp@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



**Website: <https://www.scirp.org>**

**Subscription: [sub@scirp.org](mailto:sub@scirp.org)**

**Advertisement: [service@scirp.org](mailto:service@scirp.org)**