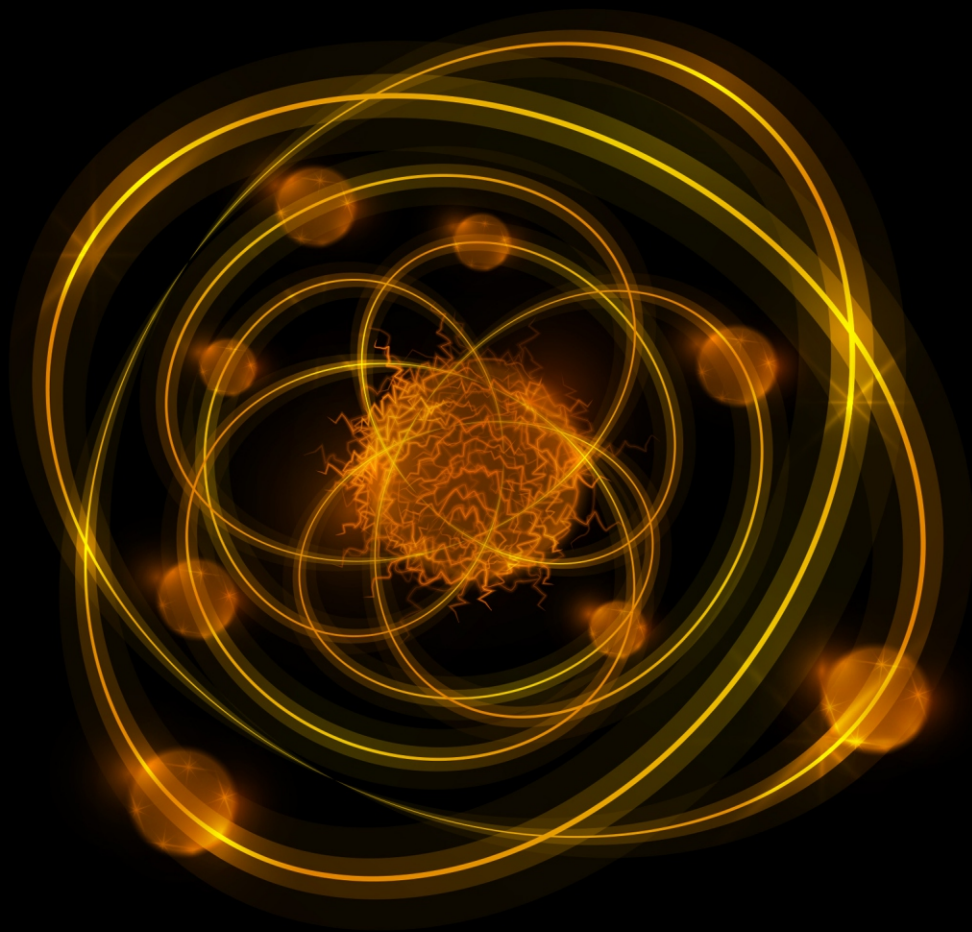


ISSN: 2161-6795

Volume 15, Number 4, October 2025



World Journal of Nuclear Science and Technology



ISSN: 2161-6795



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

Journal Editorial Board

ISSN 2161-6795 (Print) ISSN 2161-6809 (Online)

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

Editor-in-Chief

Prof. Andrzej Grzegorz Chmielewski

Institute of Nuclear Chemistry and
Technology, Poland

Editorial Board

Dr. Khaled Salahel Din Ibraheem Ahmed

South Valley University, Egypt

Prof. Abdullah Aydin

Kirikkale University, Türkiye

Prof. Jiejun Cai

South China University of Technology, China

Prof. Ahmet Cengiz

Uluda University, Türkiye

Prof. Abdelmajid Choukri

University of Ibn Tofail, Morocco

Prof. Snezana Dragovic

University of Belgrade, Serbia

Prof. Hardy Christian Ekberg

Chalmers University of Technology, Sweden

Prof. Juan-Luis François

National Autonomous University of Mexico, Mexico

Prof. Shaban Ramadan Mohamed Harb

South Valley University, Egypt

Prof. Xiaolin Hou

Technical University of Denmark, Denmark

Dr. Normamat Ismatov

Institute of Nuclear Physics, Uzbekistan

Prof. Ning Liu

Sichuan University, China

Prof. Man Gyun Na

Chosun University, South Korea

Prof. Dragoslav Nikezic

University of Kragujevac, Serbia

Dr. Rafael Rodríguez Pérez

University of Las Palmas de Gran Canaria, Spain

Prof. K. Indira Priyadarsini

Bhabha Atomic Research Centre, India

Dr. Mohammad Mizanur Rahman

Bangladesh Atomic Energy Commission, Bangladesh

Prof. Massimo Rogante

Studio d'Ingegneria Rogante, Italy

Prof. Vitalii D. Rusov

Odessa National Polytechnic University, Ukraine

Prof. Chhanda Samanta

Virginia Military Institute, USA

Prof. Kune Y. Suh

Seoul National University, South Korea

Prof. Wenxi Tian

Xi'an Jiaotong University, China

Dr. Heiko Timmers

UNSW Canberra City, Australia

Prof. Marco Túllio Menna Barreto de Vilhena

Federal University of Rio Grande do Sul, Brazil

Dr. Jun Wang

University of Wisconsin Madison, USA

Dr. Leopoldo A. Pando Zayas

University of Michigan, USA

Table of Contents

Volume 15 Number 4

October 2025

Modulation of the Excitation Characteristics of the Na Atom in Quantum Plasma via Spherical Confinement and Plasma Screening

L. Gomis, C. Diatta, I. G. Faye, Y. Diouf, M. Coulibaly, R. Gomis, A. Kossi 135

World Journal of Nuclear Science and Technology (WJNST)

Journal Information

SUBSCRIPTIONS

The *World Journal of Nuclear Science and Technology* (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

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 © 2025 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 © 2025 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.

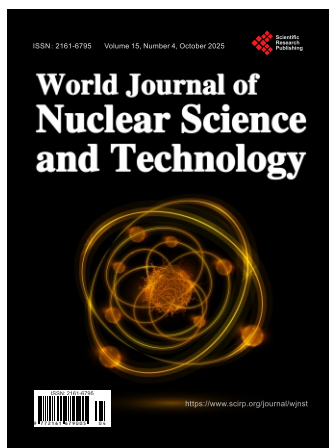
Disclaimer of liability

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: wjnst@scirp.org



World Journal of Nuclear Science and Technology (WJNST)

ISSN 2161-6795 (Print) ISSN 2161-6809 (Online)

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

World Journal of Nuclear Science and Technology (WJNST) is an international peer-reviewed, open access journal publishing in English original research studies, reviews in all aspects of nuclear science and technology and its applications. Symposia or workshop papers may be published as supplements.

Editor-in-Chief

Prof. Andrzej Grzegorz Chmielewski

Editorial Board

Dr. Khaled Salahel Din Ibraheem Ahmed
Prof. Abdullah Aydin
Prof. Jiejun Cai
Prof. Ahmet Cengiz
Prof. Abdelmajid Choukri
Prof. Snezana Dragovic
Prof. Hardy Christian Ekberg
Prof. Juan-Luis François
Prof. Shaban Ramadan Mohamed Harb

Prof. Xiaolin Hou
Dr. Normamat Ismatov
Prof. Ning Liu
Prof. Man Gyun Na
Prof. Dragoslav Nikezic
Dr. Rafael Rodríguez Pérez
Prof. K. Indira Priyadarsini
Dr. Mohammad Mizanur Rahman
Prof. Massimo Rogante

Prof. Vitalii D. Rusov
Prof. Chhanda Samanta
Prof. Kune Y. Suh
Prof. Wenxi Tian
Dr. Heiko Timmers
Prof. Marco Túllio Menna Barreto de Vilhena
Dr. Jun Wang
Dr. Leopoldo A. Pando Zayas

Subject Coverage

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

- Fuel Cycle and Isotopes
- Global Nuclear Security Technology
- Nonreactor Nuclear Facilities
- Nuclear and Chemical Waste Management
- Nuclear and Particle Physics
- Nuclear Cardiology
- Nuclear Energy
- Nuclear Engineering and Design
- Nuclear Fusion
- Nuclear Instruments and Methods
- Nuclear Magnetic Resonance Spectroscopy
- Nuclear Materials
- Nuclear Medicine and Biology
- Nuclear Medicine and Molecular Imaging
- Nuclear Physics
- Nuclear Science and Techniques
- Nuclear Structural Engineering
- Nuclear Track Detection
- Nuclear Tracks and Radiation Measurements
- Radiation Applications and Instrumentation
- Radioanalytical and Nuclear Chemistry
- Reactor and Nuclear Systems
- Reactor Science and Technology

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 WJNST.

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

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

E-mail: wjnst@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



**Scientific
Research
Publishing**

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

Subscription: sub@scirp.org

Advertisement: service@scirp.org