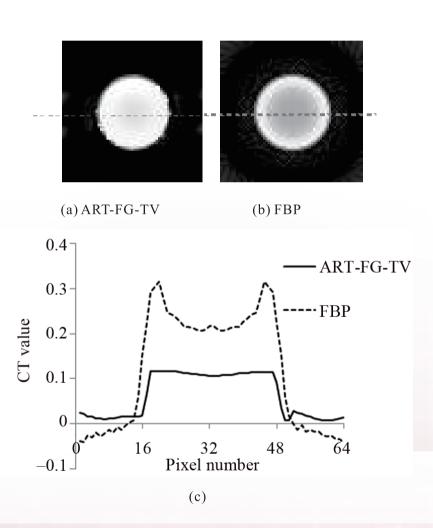




World Journal of Nuclear Science and Technology





Journal Editorial Board

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

http://www.scirp.org/journal/wjnst

Editor-in-Chief

Prof. Andrzej Grzegorz Chmielewski Institute of Nuclear Chemistry, Poland

Editorial Board

Dr. Abdullah Aydin Kirikkale University, Turkey

Dr. Jiejin Cai Sun Yat-sen University, China

Prof. Ahmet Cengiz Uluda University, Turkey

Prof. Abdelmajid Choukri University of Ibn Tofail, Morocco

Prof. Snežana 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. Shilun Guo China Institute of Atomic Energy, China

Prof. Shaban Ramadan Mohamed Harb South Valley University, Egypt

Prof. Xiaolin Hou Technical University of Denmark, Denmark

Prof. Ning Liu Sichuan University, China

Prof. Man Gyun Na Chosun University, South Korea

Prof. Dragoslav NikezicUniversity of Kragujevac, Serbia

Dr. Rafael Rodríguez Pérez University of Las Palmas de Gran Canaria, Spain

Prof. K. Indira Priyadarsini Bhabha Atomic Research Centre, India

Prof. Vitalii D. Rusov Odessa National Polytechnic University, Ukraine

Prof. Chhanda Samanta Saha Institute of Nuclear Physics, India

Dr. Wataru Shu Japan Atomic Energy Agency, Japan

Prof. Kune Y. Suh Seoul National University, South Korea

Prof. Wenxi Tian Xi'an Jiaotong University, China

Prof. João dias de Toledo Arruda-Neto University of São Paulo, Brazil

Prof. Avesh Kumar Tyagi Homi Bhabha National Institute, India

Prof. Marco Túllio Menna Barreto de Vilhena Federal University of Rio Grande do Sul, Brazil

Dr. Leopoldo A. Pando Zayas University of Michigan, USA

Number 4

Volume 2



TABLE OF CONTENTS

Volume 2	Number 4	October 2012
Correlations	in Nuclear Interactions between $E_{\it CM}/u$ and Unexplained Experimental	Observables
W. Westmeie	er, R. Brandt, R. Hashemi-Nezhad, R. Odoj, W. Ensinger, M. Zamani-Valasiadou, A. Sos	nin125
The Radiatio	on Degradation of Neutral Red Solution by γ-Ray	
XH. Liu, Y.	. Deng, YH. Zhou, L. Xia, LL. Ding, YC. Zhang	133
Dose-Depend	dence of Trap Parameters of OSL Decay from Al ₂ O ₃ :C	
A. G. Tanır, l	M. H. Bölükdemir, R. Ghomi	138
An Approxin	mation for the Doppler Broadening Function and Interference Term Usi	ng Fourier Series
A. C. Goncal	lves, D. A. P. Palma, A. S. Martinez	144
Differential (Cross Section of Electron Scattering from ³ He and ³ H Nuclei with Consid	dering Pionic
Contribution	1	
N. Hamdolah	ni, F. Zolfagharpour, N. S. Nikkhoo	150
Selected Che	emical Aspects of Nuclear Power Development	
A. G. Chmiel	lewski, M. Brykala, T. Smolinski	154
Characteriza	tion of ¹³⁷ Cs in Riyadh Saudi Arabia Soil Samples	
A. S. Alaame	ет	161
Radon Awar	eness among Saudi People in Riyadh, Saudi Arabia	
A. S. Alaame	er	165
Reduction of	f the Beam Hardening Artifacts in the X-Ray Computer Tomography: E	nergy
Discrimination	on with a Photon-Counting Detector	
Y. Imura, T.	. Yanagida, H. Morii, H. Mimura, T. Aoki	169
New Method	l for Diagnostics of Ion Implantation Induced Charge Carrier Traps in M	Aicro- and
Nanoelectron	nic Devices	
M. A. Rana		174
Reconstructi	ion of the Neutron Flux in a Slab Reactor	
	a, A. S. Martinez, A. da C. Gonçalves	
Measuremen	nt of Natural Radioactivity in Sand Samples Collected from Ad-Dahna D	esert in
Saudi Arabia	a	
A. S. Alaame	er	187
Development	t of New Methodology for Distinguishing Local Pipe Wall Thinning in N	uclear
Power Plants	s	
K. M. Hwang	g, H. Yun, C. K. Le	192
Charge Fluct	tuations in <i>pp</i> and <i>AA</i> Collisions at RHIC and LHC Energies	
S. Ahmad, M	M. Zafar, M. Irfan, A. Ahmad	200

The figure on the front cover is from the article published in World Journal of Nuclear Science and Technology, 2012, Vol. 2, No. 4, pp. 169-173 by Yukino Imura, et al.

Copyright © 2012 SciRes. **WJNST**

World Journal of Nuclear Science and Technology (WJNST)

Journal Information

SUBSCRIPTIONS

The World Journal of Nuclear Science and Technology (Online at Scientific Research Publishing, www.SciRP.org) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$39 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©2012 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 assumes 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) http://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. Abdullah Aydin

Dr. Jiejin Cai

Prof. Ahmet Cengiz Prof. Abdelmajid Choukri

Prof. Snežana Dragovic

Prof. Hardy Christian Ekberg

Prof. Juan-Luis François

Prof. Shilun Guo

Prof. Shaban Ramadan Mohamed Harb

Prof. Xiaolin Hou

Prof. Ning Liu

Prof. Man Gyun Na

Prof. Dragoslav Nikezic

Dr. Rafael Rodríguez Pérez

Prof. K. Indira Priyadarsini Prof. Vitalii D. Rusov Prof. Chhanda Samanta

Dr. Wataru Shu

Prof. Kune Y. Suh Prof. Wenxi Tian

Prof. João dias de Toledo Arruda-Neto

Prof. Avesh Kumar Tyagi

Prof. Marco Túllio Menna Barreto de Vilhena

Dr. Leopoldo A. Pando Zavas

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
- Solid State Nuclear Magnetic Resonance

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

http://www.scirp.org/journal/wjnst E-mail: wjnst@scirp.org