

JOURNAL OF CONDENSED MATTER NUCLEAR SCIENCE

Experiments and Methods in Cold Fusion

VOLUME 9, September 2012



JOURNAL OF CONDENSED MATTER NUCLEAR SCIENCE

Experiments and Methods in Cold Fusion

Editor-in-Chief

Jean-Paul Biberian
Marseille, France

Editorial Board

Peter Hagelstein
MIT, USA

Xing Zhong Li
Tsinghua University, China

Edmund Storms
KivaLabs, LLC, USA

George Miley
*Fusion Studies Laboratory,
University of Illinois, USA*

Michael McKubre
SRI International, USA

Akito Takahashi
Osaka University, Japan

JOURNAL OF CONDENSED MATTER NUCLEAR SCIENCE

Volume 9, September 2012

© 2012 ISCMNS. All rights reserved. ISSN 2227-3123

This journal and the individual contributions contained in it are protected under copyright by ISCMNS and the following terms and conditions apply.

Electronic usage or storage of data

JCMNS is an open-access scientific journal and no special permissions or fees are required to download for personal non-commercial use or for teaching purposes in an educational institution.

All other uses including printing, copying, distribution require the written consent of ISCMNS.

Permission of the ISCMNS and payment of a fee are required for photocopying, including multiple or systematic copying, copying for advertising or promotional purposes, resale, and all forms of document delivery.

Permissions may be sought directly from ISCMNS, E-mail: CMNSEditor@iscmns.org. For further details you may also visit our web site: <http://www.iscmns.org/CMNS/>

Members of ISCMNS may reproduce the table of contents or prepare lists of articles for internal circulation within their institutions.

Orders, claims, author inquiries and journal inquiries

Please contact the Editor in Chief, CMNSEditor@iscmns.org or webmaster@iscmns.org



JOURNAL OF CONDENSED MATTER NUCLEAR SCIENCE

Volume 9

2012

CONTENTS

PREFACE

RESEARCH ARTICLES

- Study on the Phenomenon Reported “Neutron Generation at Room Temperature in a Cylinder Packed with Titanium Shavings and Pressurized Deuterium Gas” (2)
Takayoshi Asami and Noriaki Sano 1
- Instrumentation Relevant to Electrochemical Measurements in Condensed Matter Nuclear Reactions
John O’M Bockris 10
- Evidence for the Induction of Nuclear Activity in Polarized Pd/H–H₂O System
Stanislaw Szpak and Jack Dea 21
- Pulse and Amplitude Approximation for the Lossy Spin–Boson Model
Peter L. Hagelstein and Irfan U. Chaudhary 30
- Coupling between a Deuteron and a Lattice
P.L. Hagelstein and I.U. Chaudhary 50
- Excess Energy Release During Na Metal Dissolution in a Dilute Epsom (MgSO₄ · 7H₂O) Solution
Arunachalam Lakshmanan 64
- Anomalous Heat Energy Released through Cavitation-Coulombic Repulsion Oscillations Following Sodium Metal Dissolution in a Dilute Epsom Solution – Plausible Mechanisms
Arunachalam Lakshmanan 72
- An Explanation of Low-energy Nuclear Reactions (Cold Fusion)
Edmund Storms 86
- Are Ni + H Nuclear Reactions Possible?
Akito Takahashi 108

PREFACE

This is the ninth volume of the *Journal of Condensed Matter Nuclear Science*. I am very happy that the pace of publication of new volumes is increasing steadily with more quality papers. This is a good indication that the field is growing faster. This new volume comprises nine papers of major importance.

As the editor-in-chief of the journal, I have to make some decisions regarding the quality of the papers. However, sometimes, it is difficult to decide when there is a disagreement between the author and the referee. It seemed to me wiser to let the reader make his own opinion. In this volume I had to face two such situations.

On one side, Edmund Storms proposes "An explanation of Low-energy Nuclear Reactions" based on a review of the experimental facts observed so far. This is not a theoretical model per se, but anyway, it is an interesting approach to the field. The referee had objections about the paper, but it appeared to me that it would be nonetheless worthwhile to publish it as such and let other readers criticize the work, by sending comments that will be published in another volume of the journal.

On the other side the paper "Are Ni + H Nuclear Reactions Possible" by Akito Takahashi was not accepted as such by the referee. After many exchanges between the author and the referee, we took together the decision to publish the paper along with the comments of the referee and the responses of the author in an appendix. This is not the usual way of publications in scientific journals, but it seemed to me that this exchange of points of view will enrich the debate amongst theoreticians.

Jean-Paul Biberian
September 2012