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Published by Dr. Hideo Kozima, Director of the Cold Fusion Research Laboratory (Japan),
E-mail address; hjrfq930@ybb.ne.jp, cf-lab.kozima@pdx.edu
Websites; http://www.geocities.jp/hjrfq930/, http://web.pdx.edu/~pdx00210/
(Back numbers of this News are posted at the above geocities and/or PSU sites of the CFRL Websites)

CFP (Cold Fusion Phenomenon) stands for
"Nuclear reactions and accompanying events occurring in open (with external particle and energy supply), non-equilibrium system composed of solids with high densities of hydrogen isotopes (H and/or D) in ambient radiation" belonging to Solid-State Nuclear Physics (SSNP) or Condensed Matter Nuclear Science (CMNS).

This is the *CFRL News* (in English) No.102 for Cold Fusion researchers published by Dr. H. Kozima, now at the Cold Fusion Research Laboratory, Shizuoka, Japan.
This issue contains the following items:

1. JCF17 was held on March 19 and 20 in Tokyo, Japan

Program of the JCF17 Meeting is posted at JCF Website:
http://jcfrs.org/JCF17/jcf17-program.pdf
The Program of JCF17 is cited below.

Program of JCF17 Meeting

Japan CF-Research Society
Date; March 19-20, 2017

March 19 (Sun), 2017
12:00-13:00 **Registration**
13：00-13:10 **Opening Address** K. Tsuchiya (NIT, Tokyo)

Session 1 *Chairman; K. Tsuchiya (NIT, Tokyo)*

13:10-13:40 **JCF17_01** H. Numata

Microscopic structural change of Pd rod during repeated cathodic and anodic electrolysis

in glycerin-phosphoric acid and during long-term electrolysis in 0.1M Li OD

13:40-14:10 **JCF17_02** T. Sawada (Hosei U.)

Role of the magnetic monopole as the catalyst in the cold fusion

14:10-14:40 **JCF17_03** F .H. Ling et al. (Anthropocene Institute)

Global Assessment of Investment in LENR: Challenges and Outlook

14:40-15:00 ***Break***

Session 2 *Chairman; S. Narita (Iwate U.)*

15:00-15:30 **JCF17_04** A. Kitamura et al. (Technova Inc.)

Heat evolution from silica-supported nano-composite samples under exposure

to hydrogen isotope gas

15:30-16:00 **JCF17_05** Y. Iwmura et al. (Tohoku U.)

Anomalous Heat Generation Experiments Using Metal Nanocomposites

and Hydrogen Isotope Gas

16:00-16:30 **JCF17_06** T. Hioki et al. (Nagoya U.)

Synthesis of Nano-Pd Particles Included in Pores of Mesoporous Silica

and Their Thermal Stability under Hydrogen Atmosphere

16:30-17:00 **JCF17_07** M. Uchimura et al. .(Nissan Motor Co., Ltd)

Materials structure clarification for novel exothermic reaction between metal and hydrogen

March 20 (Mon), 2017

Session 3 *Chairman; Y. Iwamura (Tohoku U.)*

10:00-10:30 **JCF17_08** T. Itoh et al. (Tohoku U.)

Anomalous Excess Heat Generation by the Interaction

between Nano-structured Pd/Ni surface and D2/H2 gas

10:30-11:00 **JCF17_09** S. Narita et al. (Iwate U.)

Characterization of deuterium diffusion in multi-layered metal sample

11:00-11:30 **JCF17_10** M. Nakamura (Nissan Motor Co., Ltd)

Expectations on the new heat-generation-reaction between metal and hydrogen

11:30-13:00 ***Lunch***

Session 4 *Chairman; H. Numata*

13:00-13:30 **JCF17_11** H. Miura
Possibility of Nuclear Transmutation and Nuclear Fusion Related to Water Clusters
13:30-14:00 **JCF17_12** H. Kozima et al. (CFR Lab.)
Nuclear Transmutations in Critical and Supra-critical Electrolysis
with Graphite, Pd, W, Re, Pt and Au Cathodes Analyzed by the TNCF Model
14:00-14:30 **JCF17_13** H. Kozima et al. (CFR Lab.)
The Sociology of the Cold Fusion Phenomenon
14:30-15:00 **JCF17_14** M. Ban
Cold fusion by resonance of de Broglie wave in Multiple barrier tunnel phenomenon I
15:00-15;30 **JCF17_15** M. Ban
Cold fusion by resonance of de Broglie wave in Multiple barrier tunnel phenomenon II
15:30-16:00 **JCF17_16** K. Tsuchiya (NIT, Tokyo)
Progress of density functional methods in LENR and their problems
16:00 ***Adjorn***

2. Two papers from CFRL was presented at JCF17

The Abstracts of papers presented at JCF17 have been posted at JCF Website:
http://jcfrs.org/JCF17/jcf17-abstracts.pdf

Abstracts of Two Papers from CFRL are cited here for readers' convenience.
(1) *Proc. JCF17,* **17-12** Kozima, Ohmori and Ohta

Nuclear Transmutations in Critical and Supra-critical Electrolysis with Graphite, Pd, W, Re, Pt and Au Cathodes Analyzed by the TNCF Model

Hideo Kozima, Tadayoshi Ohmori*and Masayuki Ohta,
Cold Fusion Research Laboratory
http://www.geocities.jp/hjrfq930/
597-16 Yatsu, Aoi, Shizuoka, 421-1202 Japan
*Advanced Technology, Inc., Hokkaido Institute of Technology,
7-15 Maeda, Teine, Sapporo, 006-8585 Japan

Abstract

Nuclear transmutations observed in the surface region of C (graphite), Pd and 5d elements (W, Re, Pt and Au) cathodes used in critical and supra-critical electrolysis with

light water are analyzed using the trapped neutron catalyzed fusion (TNCF) model in accordance with the cold fusion phenomenon (CFP) observed in such 3d and 4d transition-metal hydrides and deuterides as NiH_x and PdD_x at the normal electrolysis. In the critical electrolysis, the temperature of the cathode, e.g. Pd, was raised to ca. 85 ℃ from that at normal electrolysis of about 60 – 70 ℃ and the electrode potential began to fluctuate up and down like a wave. After a few minutes reaching this stage, there occurs a glow discharge and the electrode became incandescent condition (this stage of electrolysis is termed "supra-critical electrolysis").

Surprisingly enough, there have been observed CFP in C (graphite) and 5d elements (W, Re, Pt and Au) electrodes used in light water electrolysis at these critical and supra-critical electrolysis similar to the events of CFP observed in 3d- and 4d-transition metals in light and heavy water electrolysis.

The occurrence of the cold fusion phenomenon in critical and supra-critical electrolysis resulting in the nuclear transmutation in these cathodes is consistently interpreted by the TNCF model with the CFP in PdD_x and NiH_x at the normal electrolysis; it should be noticed that the higher temperatures of the material realized by the critical and supra-critical electrolysis are favorable for the non-localization of protons(/deuterons) wavefunctions in these hydrogen non-occluding materials at near room temperature which is one of the necessary conditions for formation of trapped neutrons in the TNCF model.

(2) JCF**17-13** Kozima, Ohmori and Yamada

The Sociology of the Cold Fusion Phenomenon

Hideo Kozima, Masayoshi Ohmori* and Hiroshi Yamada**
Cold Fusion Research Laboratory
http://www.geocities.jp/hjrfq930/
597-16 Yatsu, Aoi, Shizuoka, 421-1202 Japan
*Advanced Technology, Inc., Hokkaido Institute of Technology,
7-15 Maeda, Teine, Sapporo, 006-8585 Japan
**Department of Electrical and Electronic Engineering, Iwate University, Morioka 020-8551 Japan

Abstract

In the modern society, science and technology are called sometimes "science and technology" (science-technology complex, science-technology conglomerate) all

together and supposed to be the same thing. However, they should be considered different thing in nature. Science and technology contain the same knowledge together but differ in which they aim at. The object of the science is just to know about the target and ends its activity when it is obtained. However, the technology does not finish its activity only by knowing the target but uses it for another purpose. And for these purposes, the scientific knowledges are sometimes rearranged, i.e. “A causes B” is transformed into “To get B, find out A.” Of course, it is usual to cultivate new techniques for scientific activity but only for the scientific objects. In technology, however, the purpose of the innovation is not only for the new scientific knowledge but also for the technical application. The pile up of the technical endeavor forms a system of technical methodology different from the system of scientific methodology.

Even if the former is overwhelming the latter in the modern world of technological economy, it should be emphasized that the scientific spirit has its special value for human society. In reality, the scientific spirit is diminishing as well as aesthetic and moral spirits in our society. Especially in the history of the cold fusion phenomenon, we see how the scientific spirit is overwhelmed by the entrepreneur desire and a science is in agony to be well-born in the world and be recognized its true value.

The history of the controlled nuclear fusion research substantially started in 1950s on one hand and that of CFP started in 1989 on the other show the overwhelming influence of the former on the latter, i.e. researches on the cold fusion phenomenon, as shown by the sociology of the science developed in the 20th century. The necessary conditions for the recognition of the cold fusion phenomenon as a part of the modern science are pointed out. It is pointed out that the most important factors preventing recognition of the CFP as a scientific research field are (1) the biased preference of deuteron systems affected by the hot fusion research, (2) neglect of unified perspective of the experimental facts obtained in protium and deuterium systems and (3) lack of recognition that the CFP belongs to an interdisciplinary science between nuclear and solid-state physics.

3. ICCF20 was held on October 2 – 7, 2006 in Sendai, Japan

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Details of this conference are posted at following cites;
https://www.facebook.com/iccf20/
https://ja-jp.facebook.com/iccf20/

A Report by A. Kitamura and K. Tsuchiya on the ICCF20 is posted at the JCFwebsite; http://www.jcfrs.org/file/iccf20-report.pdf