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(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.99 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) **John Dash passed away on April 13, 2016. Obituary by Christy L. Frazier of *Infinite Energy***
- (2) **John Dash, – My Personal Memoir of a Great Experimental Physicist**
- (3) ***The Science of the Cold Fusion Phenomenon*, 2nd Edition (in preparation)**
- (4) **ICCF20 will be held in Sendai, Japan on October 2 – 7, 2016**
- (5) **ITER will start on 2025**

1. John Dash passed away on April 13, 2016. Obituary by Christy L. Frazier of *Infinite Energy*

隔月刊誌 *Infinite Energy* が、4月13日に亡くなった Portland State University の John Dash の追悼記事を集めています。この News の付録にこの記事転載しましたので、ご覧ください:

<http://www.geocities.jp/hjrfq930/News/news.html>

2. John Dash, – My Personal Memoir of a Great Experimental Physicist

It was at *the International Symposium on the Cold Fusion and Advanced Energy Sources* (Minsk, Belarus, May 25 – 26) in 1994 that I met John Dash and from then on had a best friend and had an intimate collaboration on the researches in the cold fusion phenomenon for about 20 years.



John Dash and me, in Portland, Oregon, January 2007.

The reason that I have been a very good collaborator with him from the first may be the common understanding of this phenomenon. Our instinct and commonsense in physics told us the necessity of neutrons to induce nuclear reactions in solids at near room temperature without any acceleration mechanisms. We published our papers telling this commonsense simultaneously by chance.

He expressed his belief on this point in the paper presented at the Fourth International Conference on the Cold Fusion (ICCF4) in Maui, Hawaii (Dec. 6 – 9, 1993) as *“The occurrence of gold and silver in these experiments seems unlikely to have been caused by impurities being deposited in the localized, high concentrations which were observed. On the other hand, these elements could have been produced by transmutation if slow neutrons were present.”* (J. Dash, G. Noble and D. Diman, “Surface Morphology and

Microcomposition of Palladium Cathodes after Electrolysis in Acidified Light and Heavy Water: Correlation with Excess Heat,” *Proc. ICCF4*, Vol. 2, pp. 25-1 – 25-11 (1994) (p. 25-10). It will be the good place to cite his papers on the cold fusion phenomenon until 2000. On the end of this letter, I printed all his papers* I received from him on my request in Portland.

At this Conference, on the other hand, I presented my paper “Trapped Neutron Catalyzed Fusion of Deuterons and Protons in Inhomogeneous Solids,” *Fusion Technol.* Vol. 26 (*Proc. ICCF4*), pp. 508 – 515 (1994).

His papers* in the early days of his research in this field show clearly that he had been interested in the curiosity of the phenomenon occurring in the systems composed of transition metals with not only deuterons but also with hydrogens not confining his interest to the former that was popular at that time. Also, he was one of first researchers who noticed the nuclear transmutation and surface nature of the reactions in addition to generation of excess heat in the cold fusion materials. These trends have grown up to main branches of this field, now.

After my retirement from the Shizuoka University, Japan in 1999, he invited me to the Portland State University as a visiting Professor supported by a gift for him from the New York Community Trust. I had been in the Portland State University as a visiting Professor from September 2000 to August 2003 and also two months a year from 2004 to 2006. I had given a one semester lecture “*Cold Fusion Phenomenon*” to students in graduate course in the Winter Term, 2003. There attended a few students including Jon Warner and Greg Goddard in the Doctor Course and Salas Cano Conrado in the Master Course.

I have published more than 20 papers in these periods including 6 papers** coauthored with John and his students on the cold fusion phenomenon and they served as important materials to develop my theoretical model and also to establish the science of the cold fusion phenomenon. The collaboration with John Dash flourished in my book*** published in 2006 from Elsevier Science.

It should be necessary to add a few words on his participation in the student program “Apprenticeships in Science and Engineering” held every summer organized by the Oregon State University. While I had been in the Portland State University, I assisted his teaching two or three high school students a year in simple experiments on the cold fusion phenomenon. At the ICCF 10 held in Cambridge, Massachusetts

(August 24 – 29, 2003), John had presented a demonstration by high school students on the excess heat production in the electrolytic system with Pd cathode and heavy water as an example of his participation to the student program.

Bill Dash, a son of John living in Portland, Oregon, mailed me about John's curriculum vitae on my request as follows:

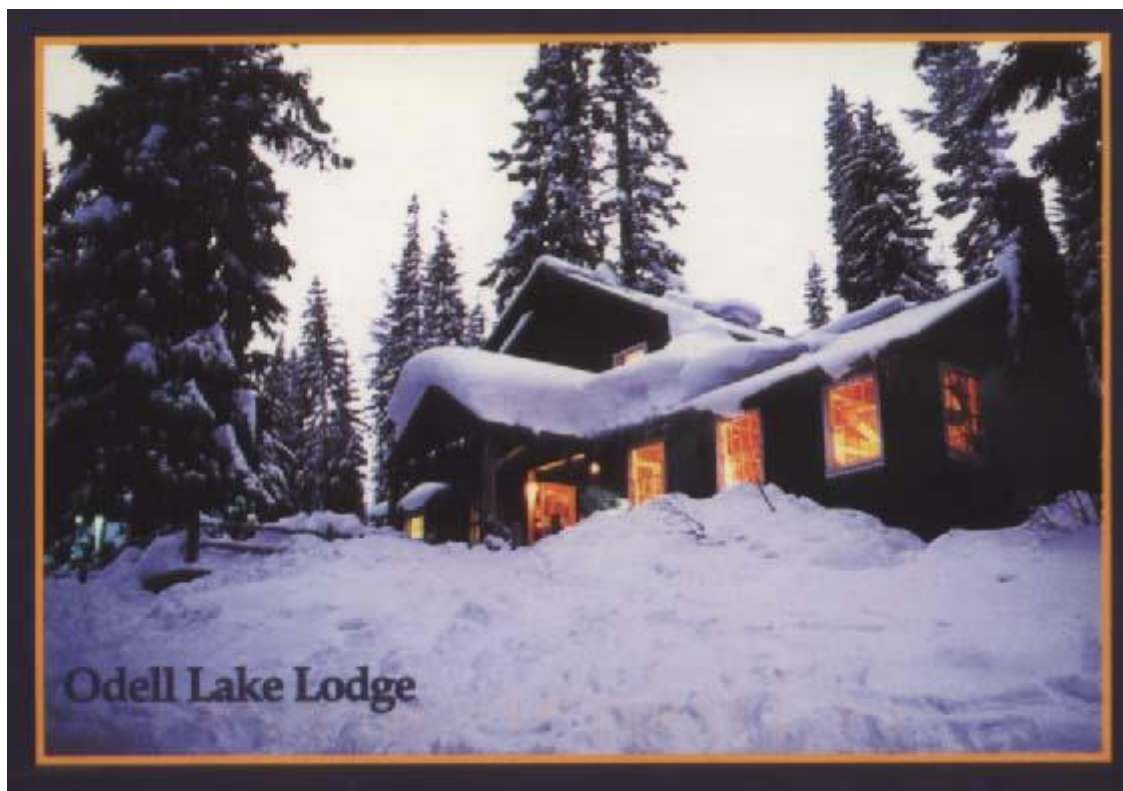
"Hi Hideo,

He (John) was born June 29, 1933, in Hazleton, PA.

He died April 13, 2016 in Portland, Oregon.

His parents were both immigrants from western Ukraine. They were Mary Hatches Dashifsky and Michael Dashifsky.

Bill."



Picture of Odell Lake Lodge, Crescent Lake, Oregon from the picture postcard from John Dash arrived on April 13, 2016..

The last picture postcard from John arrived on April 13 with a short sentences handwritten by him, *"Takako + Hideo, thanks for the letter and pictures,"* which we sent a month ago. On the back of the card, there is a picture of the *Odell Lake Lodge, Crescent Lake, Oregon* in Winter which reminds us the pleasant Christmas days at the

Timberline Lodge, Mt. Hood, Oregon with John and his son Bill. The everlasting sweet and vivid memories with John in researches and daily life in Portland, Oregon are an inexhaustible source of my activity forever. (Hideo Kozima)



Timberline Lodge, Mt. Hood, Oregon

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- (1) J. Dash, P.S. Keefe, E. Nicholas and D.S. Silver, "Comparison of Light and Heavy Water Electrolysis with Palladium Cathodes," *Proc. 80th Ann. Conf. American Electroplaters and Surface Finishers Society* (Orlando, Florida, June 1993), p. 755 (1993)
- (2) D.S. Silver, J. Dash and P.S. Keefe, "Surface Topography of a Palladium Cathode after Electrolysis in Heavy Water," *Fusion Technol.*, 24, pp.423 – 430 (1993).
- (3) J. Dash, G. Noble and D. Diman, "Changes in Surface Topography and Microcomposition of a Palladium Cathode caused by Electrolysis in Acidified Light Water," *Proc. Int. Sym. Cold Fusion and Advanced Energy Sources* (Minsk, Belarus, May 25 – 26, 1994), pp. 172 – 183 (1994).
- (4) J. Dash, G. Noble and D. Diman, "Surface Topography and Microcomposition of Palladium Cathodes after Electrolysis in Acidified Light and Heavy Water: Correlation with Excess Heat," *Proc. ICCF4*, Vol. 2, pp. 25-1 – 25-11 (1994).
- (5) S. Miguet and J. Dash, "Microanalysis of Palladium after Electrolysis in Heavy Water," *Proc. Low Energy Nuclear Reactions Conference*, pp. 23 – 27 (1995).

- (6) G. Noble, J. Dash, M. Breiling and L. McNasser, "Electrolysis of Heavy Water with a Palladium and Sulfate Composite," *Proc. ICCF5*, pp. 136 – 139 (1995).
- (7) R. Kopecek and J. Dash, "Excess Heat and Unexpected Elements from Electrolysis of Heavy Water with Titanium Cathodes," *J. New Energy*, 1-3 (*Proc. 2nd International Low Energy Nuclear Reactions*), pp. 46 – 53 (1996), ISSN 1086-8259.
- (8) J. Dash, "Chemical Changes and Excess Heat caused by Electrolysis with H₂SO₄-D₂O Electrolyte," *Proc. ICCF6*, pp. 477 – 481 (1996).
- (9) J. Dash, R. Kopecek and S. Miguet, "Excess Heat and Unexpected Elements from Aqueous Electrolysis with Titanium and Palladium Cathodes," *Proc. 32nd Intersociety Energy Conversion Engineering Conference*, 2, pp. 1350 – 1355 (1997).
- (10) M.F. Klopfenstein and J. Dash, "Thermal Imaging during Electrolysis of Heavy Water with a Ti Cathode," *Proc. ICCF7*, pp. 98 – 102 (1998).
- (11) J. Warner and J. Dash, "Heat Produces during the Electrolysis of D₂O with Titanium Cathodes," *Proc. ICCF8*, pp. 161 – 167 (2000).
- (12) G. Goddard and J. Dash, "Characterization of Uranium Co-deposited with Hydrogen on Nickel Cathodes," *Trans. Am. Nucl. Soc.*, **83**, pp. 376 – 378 (2000).

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- (1) H. Kozima¹, J. Warner, G. Goddard, "Cold Fusion Phenomenon and Atomic Processes in Transition-metal Hydrides and Deuterides," *Journal of New Energy*, **6-2**, pp. 126 – 139 (2001), ISSN 1086-8259.
- (2) J. Dash, I. Savvatimova, G. Goddard, S. Frantz, E. Weis and H. Kozima, "Effects of Hydrogen Isotope on Radioactivity of Uranium" *Proc. 11th Intern. Conf. Emerging Nuclear Energy Systems* (September 29 - Oct. 4, 2002, Albuquerque, NM, USA) pp.122 – 126 (2002)..
- (3) J. Dash, I. Savvatimova, S. Frantz, E. Weis and H. Kozima, "Effects of Glow Discharge with Hydrogen Isotope Plasmas on Radioactivity of Uranium" *Proc. ICCF9*, pp. 77 – 81 (2003).
- (4) H. Kozima, J. Warner, C. Salas Cano and J. Dash, "Consistent Explanation of Topography Change and Nuclear Transmutation in Surface Layers of Cathodes in Electrolytic Cold Fusion Experiments," *Proc. ICCF9*, pp. 178 – 181 (2003).
- (5) H. Kozima, J. Warner, C. Salas Cano and J. Dash, "TNCF Model Explanation of Cold Fusion Phenomenon in Surface Layers of Cathodes in Electrolytic Experiments," *J. New Energy*, **7-1**, pp. 81 – 95 (2003), ISSN 1086-8259.
- (6) H. Kozima, W.-S. Zhang and J. Dash, "Precision Measurement of Excess Energy in Electrolytic System Pd/D/H₂SO₄ and Inverse-power Distribution of Energy Pulses vs.

Excess Energy,” *Proc. ICCF13*, pp. 348 – 358 (2008), ISSB 978-5-93271-428-7.

***H. Kozima, *The Science of the Cold Fusion Phenomenon*, Elsevier Science, 2006.
ISBN-10: 0-08-045110-1. .

3. *The Science of the Cold Fusion Phenomenon*, 2nd Edition (in preparation)

After 10 years of publication of my book *The Science of the Cold Fusion Phenomenon* (Elsevier (2006), ISBN-10:0-080-45110-1), there have been many developments in the researches of the cold fusion phenomenon (CFP). I have planned to revise and enlarge the book to meet the demands of readers to update their knowledge at the time several patents have been issued and applications are scheduled to appear.

The preparation of the revised version is in progress. To meet the demands of researchers interested in the outline of the revised version, Contents and References are posted at the following CFRL website. In addition to these general materials, there are several Sections and pages in addition to the Preface and the Epilogue showing the new perspective contained in the new book;

<http://www.geocities.jp/hjrfq930/Books/bookse/bookse03II.html>

4. ICCF20 will be held in Sendai, Japan on October 2 – 7, 2016

A mail was sent from Dr. Y. Iwamura, an ICCF20 Co-Chair as follows;

Dear Colleagues,

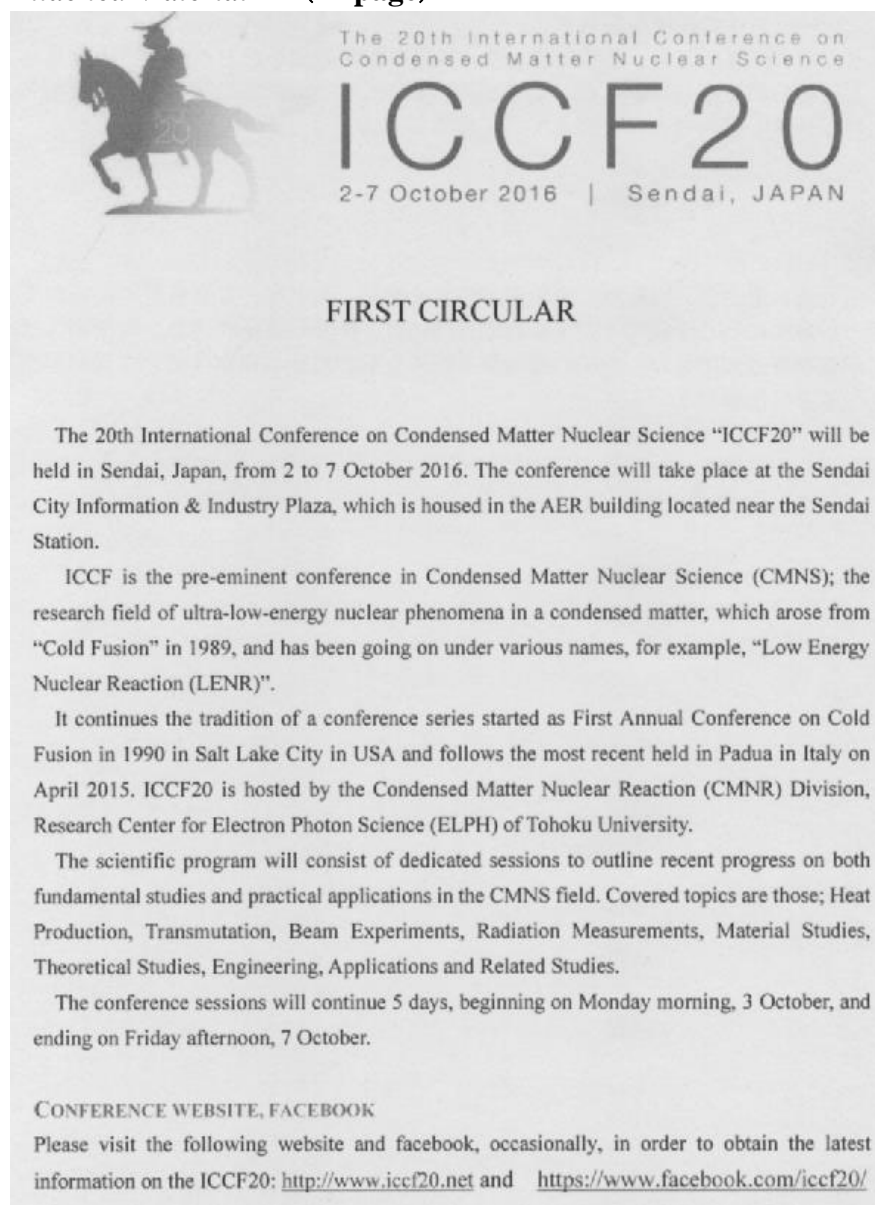
The attached is the first circular for ICCF20.

Please visit <http://www.iccf20.net>

Best regards,

Yasuhiro Iwamura

Attached Material (1st page)



5. ITER will start on 2025

“ST PAUL-LEZ-DURANCE, France (16 June 2016) – Concluding a two-year effort by the ITER Organization and the seven Domestic Agencies to establish a new baseline schedule, the ITER Council has endorsed the updated Integrated Schedule for the ITER Project, which identifies the date of First Plasma as December 2025.” (From the Press Release of the ITER Council)

The Press Release of the ITER Council is posted at the following CFRL website;
<http://www.geocities.jp/hjrfq930/News/news.html>

The Asahi Shimbun, a Japanese Newspaper, reported the News Release of the ITER Council critically as follows. (Freely translated by H.K.)

“THE EXPERIMENTAL TOKAMAK NUCLEAR FUSION REACTOR PRACTICAL USE IS RECEDING AGAIN

– Alterations one by one, The date of first plasma will be in 2025

The ITER Council declared the date of first plasma of the ITER which being constructed by the ITER Organization and the seven Domestic Agencies to be the year of 2025 on June 16. The elongations and alterations of the date of first plasma have been four times and the practical use is receding further more.

The postpone of the schedule was determined by the ITER Council held in Cadarache, South France. Details have not been released but seems due to the overhaul of the schedule by the ITER Director-General Bernard Bigot.

At first in 2007, the first experiment of ITER was scheduled to start on 2018. However, the schedule was postponed several times by many factors including deficit of funds. There has been piled up dissatisfaction on the project especially in the USA where the Congress has asked to withdraw from the project.

It is scheduled that Japan will bear 210 billion yen as a whole and already paid 130 billion yen. The two ITER Director-General before Mr. Bernard Bigot were Japanese. (By Ryoko Takeishi)”