# *CFRL* ニュース No. 99　　(2016. 7. 1)

Cold Fusion Research Laboratory (Japan) Dr. Hideo Kozima, Director
E-mail address; cf-lab.kozima@nifty.com
Websites; http://www.geocities.jp/hjrfq930/
http://web.pdx.edu/~pdx00210/
News のバックナンバーその他は上記ウェブサイトでご覧になれます

**常温核融合現象 CFP** (The Cold Fusion Phenomenon)は、「開いた（外部から粒子とエネルギーを供給され、背景放射線に曝された）、非平衡状態にある、高密度の水素同位体(Hand/D)を含む固体中で起こる、核反応とそれに付随した事象」を現す言葉で、固体核物理学(Solid-State Nuclear Physics)あるいは凝集体核科学(Condensed Matter Nuclear Science) に属すると考えられています。

*CFRL* ニュース No.99 をお送りします。この号では、次の記事を掲載しました。

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 , 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** の追悼記事を特集しています。この **News** の付録にこの記事を転載しましたので、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.

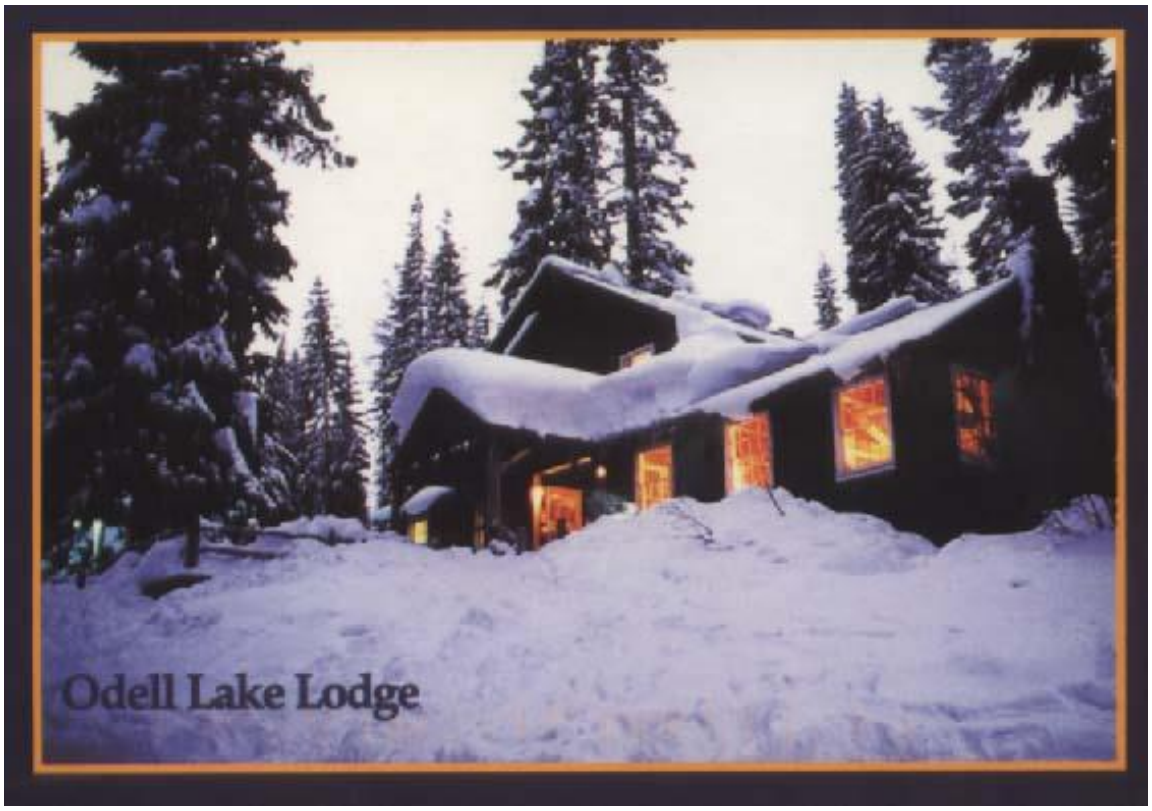
After my retirement from the Shizuoka University, Japan in 1999, he invited me to the Portland State University as a visiting Professor supported by a gift for him from the New York Community Trust. I had been in the Portland State University as a visiting Professor from September 2000 to August 2003 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.

Timberline Lodge, Mt. Hood, Oregon

*****

**(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 $H_2SO_4$-$D_2O$ 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 $D_2O$ 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).

**

(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/$H_2SO_4$ 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)

2006 年に発刊された拙著 *The Science of the Cold Fusion Phenomenon*, Elsevier (2006), ISBN-10:0-080-45110-1 も 10 年経って、この分野におけるその後の多くの発展を追加すべきときに至りました。出版社の意向もあり、この秋までに改訂版を出す予定で準備を進めていますが、宣伝を兼ねて常温核融合現象の本質を知っていただきたいと思い、改訂版の特徴を示す Contents と References に加え、いくつかの章節をウェブサイトに掲示しました。次のサイトにアクセスしていただくと、それらの章節をお読みいただけます:
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）**

The 20th International Conference on Condensed Matter Nuclear Science

# ICCF20

2-7 October 2016 | Sendai, JAPAN

## FIRST CIRCULAR

The 20th International Conference on Condensed Matter Nuclear Science "ICCF20" will be held in Sendai, Japan, from 2 to 7 October 2016. The conference will take place at the Sendai City Information & Industry Plaza, which is housed in the AER building located near the Sendai Station.

ICCF is the pre-eminent conference in Condensed Matter Nuclear Science (CMNS); the research field of ultra-low-energy nuclear phenomena in a condensed matter, which arose from "Cold Fusion" in 1989, and has been going on under various names, for example, "Low Energy Nuclear Reaction (LENR)".

It continues the tradition of a conference series started as First Annual Conference on Cold Fusion in 1990 in Salt Lake City in USA and follows the most recent held in Padua in Italy on April 2015. ICCF20 is hosted by the Condensed Matter Nuclear Reaction (CMNR) Division, Research Center for Electron Photon Science (ELPH) of Tohoku University.

The scientific program will consist of dedicated sessions to outline recent progress on both fundamental studies and practical applications in the CMNS field. Covered topics are those; Heat Production, Transmutation, Beam Experiments, Radiation Measurements, Material Studies, Theoretical Studies, Engineering, Applications and Related Studies.

The conference sessions will continue 5 days, beginning on Monday morning, 3 October, and ending on Friday afternoon, 7 October.

### CONFERENCE WEBSITE, FACEBOOK

Please visit the following website and facebook, occasionally, in order to obtain the latest information on the ICCF20: http://www.iccf20.net and https://www.facebook.com/iccf20/

## 5. ITER will start on 2025

6 月 18 日の「朝日新聞」は、16 日に発表された ITER 機構理事会の、実験開始の延期決定を次のように、批判的に報道しています。

**「核融合実験炉　遠のく実用化　－　相次ぐ変更　実験開始 25 年に**

日米欧など7カ国・地域が南仏に建設している国際熱核融合実験炉（ITER）の実験開始時期が5年遅れ、2025 年になることが 17 日決まった。実験開始の延期や変更はすでに4回目、実用化は遠のく一方だ。

実験開始の延期は南仏カダラッシュで開かれたITER機構理事会で決定。詳細は理由は公表されていないが、昨年就任したフランスのベルナール・ピゴ機構長が勧める作業工程の見直しによるとみられる。

ITER は 07 年に 18 年の実験開始を目指して建設開始。だが、資金不足などで延期を繰り返してきた。先行き不透明な現状への不満から、米国では連邦議会が経過からの離脱を求める事態に発展している。

日本の負担は当初計画で 2100 億円で、すでに 1300 億円余りを負担した。ピゴ氏の前の機構長は 2 人とも日本人だった。(竹石涼子)」

ITER 機構理事会の Press Release をこの News の付録に掲示しました:
http://www.geocities.jp/hjrfq930/News/news.html