

IUPAP Activities in Japan

04/9/23

C16 member M. Inutake

1. A letter together with an e-mail for requesting a prompt issue of US VISA was sent by IUPAP section of Science Council of Japan in May, 2004.

Unfortunately, there is no response yet.

Dr. John H. Marburger
Director, Office of Science and Technology Policy
USA

Dear Dr. Marburger:

Science Council of Japan is the liaison committee in Japan to IUPAP, the International Union of Pure and Applied Physics, which has missions to assist in the worldwide development of physics, to foster international cooperation in physics, and to help in the application of physics toward solving problems of concern to humanity. National Committee for Physics of Science Council of Japan supports the letter of IUPAP president, Yves Petrof, which has been sent to you last December.

Your country has been open to world and then a true basis for international scientific interactions for a long time. Such human interactions play vital roles in the progress of science. Many Japanese physicists, including ourselves, cherish the memories of the warm hospitality of your country. In recent years, however, these international human interactions through USA are confronted with various barriers. Especially Chinese and Russian colleagues are having difficulty in obtaining US visas to attend international conferences and scientific meetings in USA. This makes international gatherings held in USA not truly international. Furthermore we often see that scientists from non-US institutions have to wait for long time in getting visa to work in USA.

We would like to see these problems be solved as soon as possible.

We fully understand that September -11 tragedy might have left deep consequences in your society and that you have to make a close inspection of peoples visiting your country. At the same time we note that international scientific communications help to recover strong human bonds.

We deeply appreciate your efforts to solve this serious and difficult problem.

Yours sincerely,

Kazuo Kitahara,
Chair, National Committee for Physics, Science Council of Japan
Professor of Physics, International Christian University, Tokyo

Hidetoshi Fukuyama,
Chair, IUPAP Section of National Committee for Physics, Science Council of Japan
Vice President, IUPAP
Professor of Physics, Institute for Material Science, Tohoku University, Sendai

CC:

Dr. George H. Atkinson
Special Adviser, Science and Technology
Room 3240, Department of State
2201 C Street NW,
Washington, DC 20520

Dr. Bruce Alberts
President, National Academy of Sciences
500 Fifth Street, N.W.
Washington, DC 20001

2. WG on Energy (IUPAP WG 6)

The Working Group on Energy was mandated by IUPAP in 2003.

1st WG was held in Bonn on Nov., 2003.

2nd WG was held in Tokyo on May, 2004.

The charge to the working group:

- * To list the various sources of useful energy and discuss how each can be expected to supply needed energy over the next 50-100 years.
- * To discuss the advantages and drawbacks of each of these sources.
- * To identify the energy needs of countries around the world and discuss different approaches that would be useful for each.
- * To make recommendations on specific areas where physics-based research and development is needed.
- * To work with ICSU so that IUPAP's efforts enhance its more general studies.
- * To prepare a paper on the findings of the working group and have this ready to present at the IUPAP General Assembly in 2005.

Membership:

Prof. Kl. Heinloth, Chair, Bonn University, Germany
Prof. Burton Richter, IUPAP Representative, Stanford University, USA
Prof. Y. Nagai, Osaka University, Japan
Prof. F. Yndurain, Universidad Autonoma de Madrid, Spain

Prof. Jon Samseth, Norwegian Physical Society, Norway
Prof. Rogerio Cerqueira Leite, Campinas University, Brazil
Prof. John Ahearn, Duke University, SIGMA Xi, USA
Prof. Yuping Huo, Chinese Academy of Sciences, P.R.China
Prof. P.K. Kaw, Institute for Plasma Research-India, India

3. IUPAP Workshop on Energy was held in Tokyo on 13 May, 2004,
prior to 2nd IUPAP WG in Tokyo on 14 May, under the cooperation of
IUPAP section of Science Council of Japan.

* Date: 9:30 - 18:30, May 13 (Thu), 2004

* Place: Center for Promotion of Computational Science and Engineering, JAERI, Tokyo, Japan

* **Presented materials can be seen on the following website :**

<http://j-parc.jp/Transmutation/ws/energyws-top.html>.

* More than 100 persons attended at the workshop, including the IUPAP member from abroad.

* **Program**

Chairperson: Y. Yamaguchi (Tokyo Univ.)

9:30-9:35 Welcome Address Y. Nagai (Osaka Univ.)

◆ **Overview of Energy Problem in the World, China and Japan**

9:35-10:05 * Introductory Talk: K. Heinloth (Bonn)

10:05-10:35 * The Energy Problem of China Huo Yuping (China)

10:35-11:15 * Energy Demand and Supply in Japan K. Yamaji (Univ.Tokyo)

11:15-11:30 Break

◆ **Research and Development of New Energy** Chairperson: T. Shibata (KEK)

11:30-12:00 * RD&D of Fuel Cell Technology H. Ishitani (Keio Univ.)

12:00-12:30 * Recent Development on Low Cost and High Efficiency Photovoltaic System for
GW Power Generation M. Kondo (AIST)

12:30-13:30 Lunch Break

◆ **Research and Development of Fusion Energy** Chairperson: M. Inoue (Ritsumeikan Univ.)

13:30-14:00 * Perspective of and Strategy for Fusion Energy Development with Tokamak
Systems

M. Seki (JAERI)

14:00-14:30 * Recent Developments on Large Helical Device and International Activity of
Helical

System Research S. Sudo (NIFS)

14:30-15:00 * Research on Laser Fusion and Related Peta Watt Laser Plasma in Japan

K. Mima (Osaka Univ.)

15:00-15:30 * Muon Catalyzed Fusion and New Fusion Energy Research

K. Nagamine (KEK)

◆ **Prospect of Accelerator Driven System (ADS):** Chairperson: Y. Kiyonagi (Hokaido
Univ.)

15:45-16:15 * Transmutation of Radioactive Waste by Accelerator Driven Subcritical System

H. Oigawa (JAERI)

◆ **Hydrogen Production, Storage and Transportation:** Chairperson: M. Inutake (Tohoku Univ.)

16:15-16:45 * Research and Development on Hydrogen Production with HTTR

M. Ogawa (JAERI)

16:45-17:15 * Hydrogen Storage for Energy Applications S. Orimo (Tohoku Univ.)

17:15-17:45 * Robust Electric Energy Network System using Superconductivity and Liquid Hydrogen T. Hamajima (Tohoku Univ.)

◆ **Possible Role of Physics for the Current and Future Energy Problem:**

Chairperson: K. Heinloth (Bonn Univ.)

17:45-18:30 * Free Discussion:

◆ **Concluding Remark:** S. Nagamiya (KEK)

JAERI: Japan Atomic Energy Research Institute

KEK: High Energy Accelerator Research Organization

AIST: National Institute of Advanced Industrial Science and Technology

NIFS: National Institute for Fusion Science

.....

3. IUPAP (WG 7) ICUIL WG

* A new Working Group called the "International Committee on Ultrahigh Intensity Lasers (ICUIL)" was started in 2003. The ICUIL is linked to C15 (Atomic, Molecular and Optical Physics), C 16 (Plasma Physics), and C 17 (Quantum Electronics), with C 16 (Plasma Physics) as the lead Commission.

* In Japan, we are discussing now at the National Committee for Physics, Science Council of Japan whether the Institute of Laser Fusion Energy, Osaka University should be reorganized to an all-Japan-collaboration institute including both the Laser Fusion Science and the Ultrahigh Intensity Laser Science in general or not.

4. WG on Women in Physics (IUPAP WG 5)

Recently, there are many meetings in Japan on Equal Opportunity for Men and Women in Universities as well as in the Physics and Applied Physics Societies in Japan.

5. ITER site issue

The ITER site selection is under a hot and serious discussion between Japan and France governments.

Japanese plasma and fusion scientists are complaining of the possible budget reduction for operating JT-60 due to the increase in the cost-sharing rate of the ITER construction. I, as the chairman of the fusion research committee of JAERI had a chance to see the director of JAERI and the administrative officers at the related ministry to recommend to keep the operation budget of JT-60 for a success of ITER as well as the early achievement of a

commercial fusion reactor and for bringing up young scientists and engineers in this field.

6. WY of Physics 2005: Activities in Japan

Action Plans for WY of Physics are in progress under the cooperation of the Science Council of Japan, Physical Society of Japan and Japan Society of Applied Physics with the sponsorship of the Japan government and corporate donations. These actions intend to evoke intellectual charms and technological values of the physics and technology to the broad public in Japan, especially to school children and students together with their teachers and parents.

As for C16, there are many Plasma Science Seminars for young people as well as citizen in the occasions of such as

- * Joint Conference on Fusion Energy in Japan, which was held in June, 2004 in Sendai.
- * Plasma Science Symposium in Japan, which will be held in January, 2005 in Nagoya under the cooperation of more than 20 Societies in Japan.