

# Beyond ESD – Advanced CNT Applications Network-Workshop

May 21st, 2009, 10:30 – 18:25 German Cultural Center 1F Hall, Tokyo

Since their discovery in 1991, Carbon Nanotubes have been granted numerous extraordinary characteristics. In 2008 for instance, approx. 100 t CNT were applied in the field of conductive plastics.

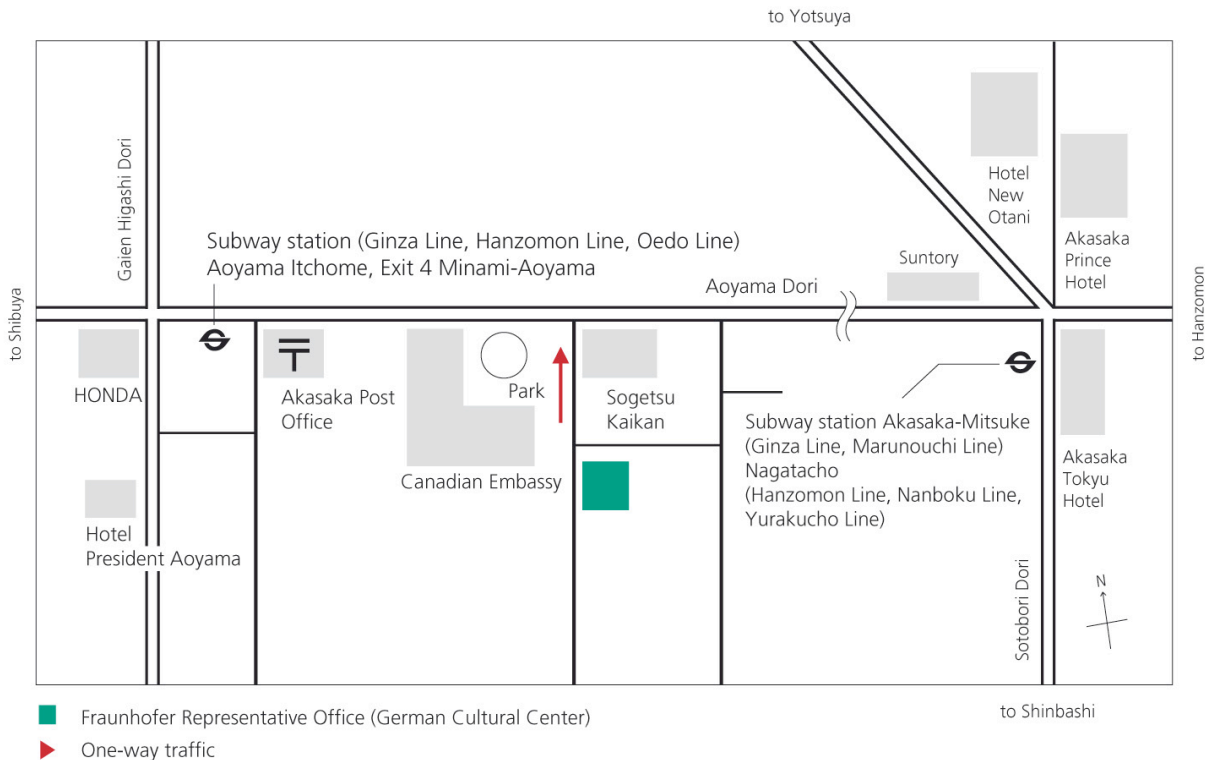
Whether the high expectations of beginnings can be met, primarily depends on the quality of products and process as well as on the innovation level of the materials.

International experts, users and customers discuss potentials and obstacles on some challenging topics such as actuating elements, metal matrix composites and transparent-conductive films with CNT.

One way to face the rising challenges in new product development and to develop faster and better products is collaboration with international expert groups.

Please join this workshop and discuss together with Carbon Nanotube specialists from Fraunhofer IPA and their international partners!

## < Access German Cultural Center (Fraunhofer Representative Office Japan) >



8 minutes walk from Aoyama-itchoe Station (Ginza / Hanzo-mon / Oedo Line), Exit 4 (north) to Fraunhofer Representative Office Japan.  
Walk towards the Akasaka Post Office and pass the Canadian Embassy. Turn right in the first side road after the Canadian Embassy and walk approx. 50 meters more.

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### < Programm > Free Entry, with simultaneous translation (English-Japanese)

10.30-10.35 **Welcome**

10.35-10.45 **Greetings:** Dr. Evelyn OBELE (German Embassy)

#### Introduction

10.45-11.00 **Introduction Fraunhofer-Gesellschaft:**

Dr. Lorenz GRANRATH (Fraunhofer Representative Office Japan)

11.00-11.15 **New Models for R&D:** Mr. Ivica KOLARIC (Fraunhofer IPA)

#### Nano Materials

11.15-12.00 **Quality of Carbon Nanotubes for Field Emission:** Prof. Cheol Jin LEE (Korea University)

#### Nano Applications

12.00-12.45 **Bottlenecks and Process Quality in CNT Applications:**

Mr. Ivica KOLARIC (Fraunhofer IPA)

12.45-13.45 **Lunch** (Lunch-Box provided)

13.45-14.30 **Diverse Carbon Nanotube Artificial Muscles:**

Mr. Mohammad H. HAQUE (The University of Texas at Dallas)

14.30-15.15 **Fast-Moving Low-Voltage Electromechanical Actuators Based on Carbon Nanotubes and Ionic Liquids:**

Dr. Kinji ASAKA (National Institute of Advanced Industrial Science and Technology, AIST Kansai)

15.15-16.00 **CNT Actuator Applications:**

Ms. Urszula KOSIDLO (Fraunhofer IPA)

16.00-16.20 **Coffee Break**

16.20-17.20 **Transparent Conductive Films based on Carbon Nanotubes:**

Prof. Siegmund ROTH (Korea University, School of Electrical Engineering WCU, Head of SINEUROPNanotech GmbH)

#### Market Potential and Discussion

17.20-18.05 **The Importance of Material Innovations for Sports Goods Sector:**

Mr. Ralf SCHWENGER (HEAD SPORT AG)

18.05-18.25 **Discussion and Closing**

**Fraunhofer-Gesellschaft** is Europe's biggest organization of applied research with 57 institutes and a staff of more than 15,000 employees. Among these, the **Fraunhofer IPA (Institute for Manufacturing Engineering and Automation)** is one of the biggest institutes focusing on research and development in industrial automation and rationalization.

The department **Process Engineering Functional Materials** of Fraunhofer IPA operates in the segment of process engineering of new materials and designs production-related solutions for material innovation. We are researching every process- and market-relevant aspect through the entire value chain to reduce the product development time for our customers significantly.

## „Beyond ESD – Advanced CNT Applications Network-Workshop“

### Registration Form

R.S.V.P by **May 15th, 2009 (Fr.)** to  
**Fax: 03 3586 7187** or **E-Mail: event@fraunhofer.jp**

I will attend „Beyond ESD – Advanced CNT Applications Network-Workshop“  
on **May 21st, 2009, 10:30 – 18:25** (German Cultural Center 1F Hall)

Company : .....

Department : .....

Job Title : .....

Name : Mr./Ms. ....

Phone : ..... Fax : .....

E-Mail : .....

\* Please check the following boxes:

- I will also attend Networking-Reception (18:30 –, Participation Fee: 5,000 Yen).
- Provide me a Lunch Box.

\*Your personal data will be used for the purpose of providing information on events and news by Fraunhofer-Gesellschaft and their related services. We will not distribute it to any third party. Your personal information will be kept under our strict control and management.

- I do not want my data to be used.