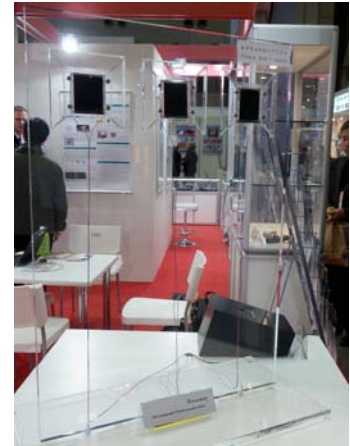


CNT Seminar – Real Solutions for Real Problems

April 15th, 2010, 14:00-18:00 German Cultural Center 1F Hall (Akasaka, Tokyo)

On the 17th of February 2010, for the first time, Carbon Nanotube experts from Fraunhofer IPA presented a carbon nanotube speaker at the Nanotech in Tokyo. The CNT paint, only a few micrometres thick, produced music according to thermoacoustic principles. In a couple of years, this technique might be celebrated as an inexpensive and almost indestructible layer at the consumer electronics markets. CNT is a key for lots of innovative products, such as lightweight high strength components, transparent and conductive coatings for consumer electronics and solar technology. These products need to fulfil a variety of specifications. Furthermore, these products have to show an outstanding cost-performance ratio and meet various conditions (REACH etc.).



Fraunhofer IPA in Stuttgart compile all these "must" requirements under the term "Total Product Quality - TPQ". Within more than 100 CNT projects with the German and European industry, expectations, process safety and licensing issues could be collected. This achievement will be now presented in Japan for the first time. Within four sessions, all relevant points of the CNT product development will be presented and discussed in a panel discussion.



Session 1: "Invention & Properties" addresses the fundamental properties of Nanotubes. Synthesis methods, material-specific properties, advantages and disadvantages are presented and discussed.

Session 2: "Applications & Markets" session, the marketing aspects of technology will be discussed. Besides the idea of potential applications, markets and pricing will be presented as well as best practice

examples.

Session 3 "Production & Quality" is based on two real life examples in the field of CNT modified lightweight structures and high performance CNT electrodes.

Session 4: "Safety & Commercialisation" is descended on the licensing and safety aspects such as REACH, nanoTox.

The seminar provides the opportunity to get a comprehensive overview and gain insider information of real products, as well as to discuss all important aspects of successful product introduction.

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< **Program** > Entry free, with simultaneous translation (English-Japanese)

14:00-14:10 Welcome & Opening Remarks

Dr. Lorenz GRANRATH (Fraunhofer Representative Office Japan, Representative)

Dr. Evelyn OBELE (German Embassy, Science, Technology and Environment, Counsellor)

14:10-15:00 [Session 1: Invention & Properties]

- Keynote Speech -

“Carbon Nanotubes – Responsible Production, Applications and Safety for Success”

Prof. Morinobu ENDO (Shinshu University, Faculty of Engineering)

15:00-15:25 [Session 2: Applications & Markets]

“How to become successful with Carbon Nanotubes”

Mr. Ivica KOLARIC (Fraunhofer IPA, Process Engineering Functional Materials, Head of Department)

15:25-15:40 Break

15:40-16:40 [Session 3: Production & Quality]

“Metal Matrix Composites with CNTs – Processing, Challenges and Possibilities”

Mr. Christoph WOLF (Fraunhofer IPA, Process Engineering Functional Materials)

“High-Performance CNT/Sol-Gel Electrodes”

Mr. Harun ERISMIS (Fraunhofer IPA, Process Engineering Functional Materials)

16:40-17:30 [Session 4: Safety & Commercialization]

- Invited Speech -

„Personal Opinion on Safety Handling of CNT”

Prof. Bunshi FUGETSU (Hokkaido University, Creative Research Institution, Nano Industrialization Laboratory)

„Legal Aspects of CNT Products”

Mr. Ivica KOLARIC (Fraunhofer IPA, Process Engineering Functional Materials, Head of Department)

17:30-18:00 Panel discussion

MC: Mr. Takashi KUROKAWA (Nikkei Inc., Staff Writer Science & Technology News Department)

18:00 Closing

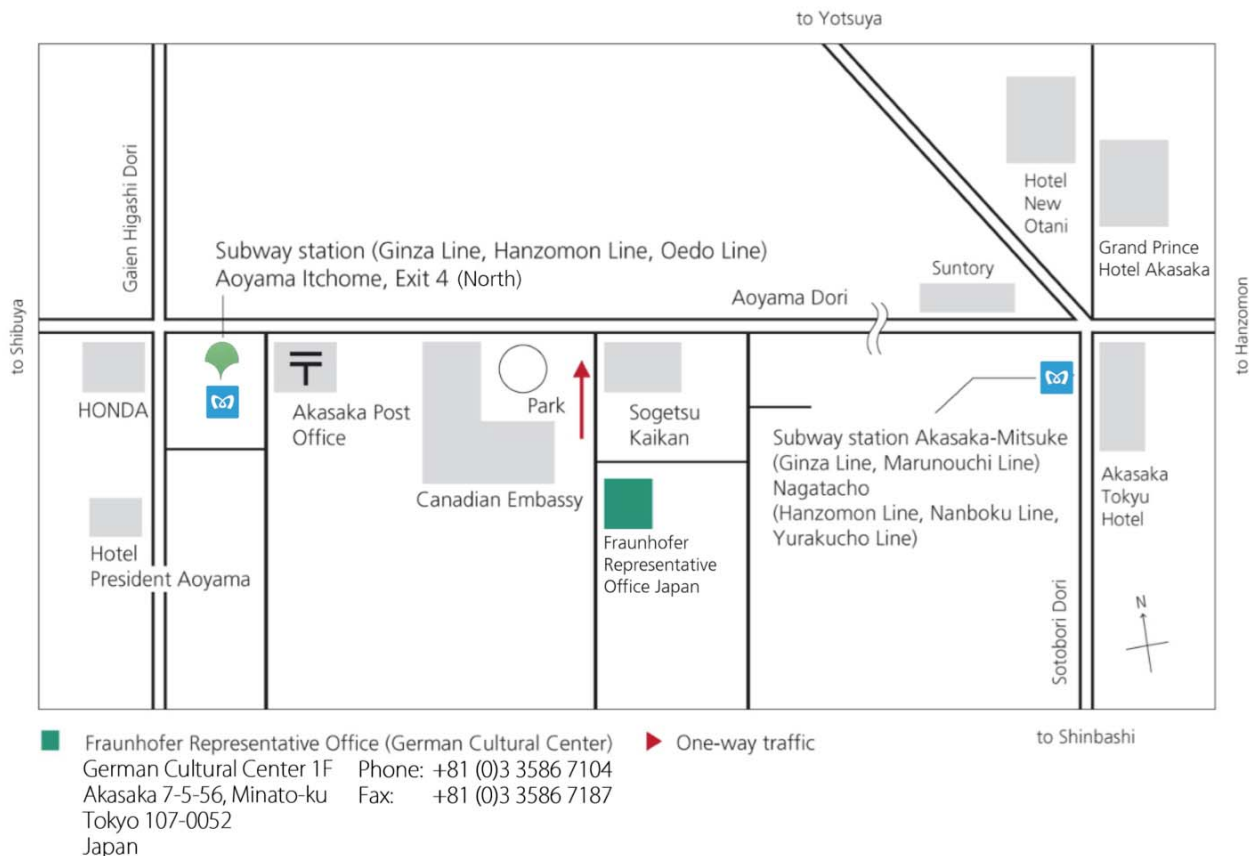
18.00-20.00 Reception (Participation Fee: 3,000 Yen)

About Fraunhofer-Gesellschaft and Fraunhofer IPA

Fraunhofer-Gesellschaft (FhG) is Europe’s biggest organization of applied research with 17,000 staff at more than 80 research units, including 59 Fraunhofer Institutes in Germany. We undertake applied research of direct utility to private and public enterprise and of wide benefit to society. **Fraunhofer Representative Office Japan** is the official representation of Fraunhofer-Gesellschaft in Japan and bridges between Fraunhofer researchers and Japanese customers.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA (Stuttgart) is one of the largest 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.

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



8 minutes walk from Aoyama-itchohome Station (Ginza / Hanzo-mon / Oedo Line), Exit 4 North to German Cultural Center. 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.