

Signing of Comprehensive Agreement of Research Collaboration with The Foundation for Scientific and Industrial Research (SINTEF) at the Norwegian University of Science and Technology (NTNU) and Institute for Energy Technology (IFE), Norway

On January 16, Unni M. Steinsmo, President of Foundation for Scientific and Industrial Research (SINTEF), Norway and Kjell H. Bendiksen, President of Institute for Energy Technology (IFE), Norway visited AIST Tsukuba and had a discussion with Hiroyuki Yoshikawa, President of AIST. They signed comprehensive agreements of research collaboration between AIST and each Norwegian institutes. A comprehensive agreement of research collaboration was already concluded with the Norwegian University of Science and Technology (NTNU) in last September. These agreements with such major research organization in Norway will strengthen our collaboration.

SINTEF has about 1,800 staffs and carries out R & D of industrial technology widely. IFE has about 500 staffs and carries out research on energy technology including atomic energy. Both the organizations have research collaborations not only within the country but are also enthusiastic about foreign collaborations. They acquire research funds by tying up research contracts with industries etc. and actively promoting collaboration in their country.

Research collaboration between AIST and the above research organizations is mainly in the fields of environment



and energy. Cooperation for the development of an optimized local energy supply system of electricity / heat / fuel including renewable energy carried out with SINTEF. AIST collaborates with IFE regarding the development and evaluation of new hydrogen storage materials and the development of a storage system of natural energy using hydrogen. Joint workshops are also held.

Along with promoting research collaboration in the fields of environment and energy, we also positively seek possible collaboration in material research such as biotechnology and nanotechnology in the future.

AIST presented the results of Grid Technology at SC06

SC 06 was hosted by ACM and IEEE in Tampa, Florida, U.S.A. from November 11 to 17. Around 7100 participants took part in the grand event.

SC is held every year in U.S.A. and it is an international conference regarding high-performance calculation, network technology, data storage and analysis. Along with large scale exhibitions by major IT companies and research organizations around the world, presentation of research papers were also held.

The Grid Technology Research Center of AIST set up a large booth of 12 meter square and presentations were made by using 18 panel exhibits and demonstrations. They also invited a number of top-class researchers related to research at the center from various countries. They and members of the center gave presentations followed by discussion.



This time there were a number of presentations related to data storage and we noticed a high demand for information from

both business & science. The Grid Technology Research Center introduced middleware Gfarm realizing a grid file system and the GEO Grid system which offers high speed and unified interface for large amounts of earth observation data which requires huge storage space.

In addition, programming tool Ninfg and GridMPI in grid environment, G-lambda which simultaneously reserves network and calculation resources surpassing management domain, OGSA-WebDB an integrated software for the database, GridASP an utility computing software etc, were introduced. Wide ranged research results of grid technology attracted the attention of about 1,000 participants who visited the AIST booth, and we were able to appeal the existence of AIST in research and development of grid technology.



International Council on Nanotechnology, Asian Workshop

As goods made of nanomaterials started to be sold in the market and movement over healthy environmental influence of nanotechnology becoming active, "ICON Asian Workshop on International Collaboration on Nanotechnology Environmental Health & Safety" (EHS) was held by International Council on Nanotechnology (ICON) with the co-sponsorship of Nanotechnology Business Creation Initiative in Tokyo from November 30 to December 1.

ICON, based in Rice University, U.S.A., measures reduction of risk by accumulating and providing information about EHS of nanotechnology and aims at maximizing social benefits. Therefore, it established collaborative relationships with various concerned parties within and outside U.S.A., and reflected in the workshop attended by researchers,



policy makers, company executives, NGOs from U.S.A., Japan, Europe, China, Australia, Taiwan, Republic of Korea and Singapore.

The University of California, Santa Barbara presented a survey report on Nanotech Industry (A Survey of Current Practices in the Nanotechnology Workplace) which was funded by ICON. There were discussions on ICON's operations, R & D of nanotechnology and present condition of EHS issues in various Asian countries in the workshop. Besides, information was exchanged on establishing safe handling methods of nanomaterials.

EHS-related policy, measurement of risk management of nanomaterials carried out by the National Institute for Environmental Studies were presented by Japan. Besides, a concrete action plan on risk management of nanoparticles being carried out as a NEDO project was introduced by Junko Nakanishi, Director of Research Center for Chemical Risk Management, AIST.

In the survey report of ICON and discussion in the workshop, it was clarified that insufficiency of toxic information of nanomaterials became a hindrance while dealing with the issue of EHS of Nanotechnology. Thus, introduction of the Japanese project attracted attention.

Workshop with Chinese Academy of Sciences

CAS-AIST-NEDO Workshop 2006 on Energy and Environment-Related Nanotechnology

Workshop called "CAS-AIST-NEDO Workshop 2006 on Energy and Environment-Related Nanotechnology" was held from December, 11 to 13 in Beijing, China by the co-sponsorship of Chinese Academy of Sciences (CAS), National Institute of Advanced Science and Technology (AIST) and New Energy and Industrial Technology Development Organization (NEDO).

As a definite action plan based on the comprehensive agreement of research collaboration between CAS and AIST in May, 2004 attracted worldwide attention. Hoping for merits of mutual cooperation between China and Japan focusing in the fields of environment and energy, it was followed by another workshop held under the tripartite sponsorship in Guangzhou, China in November, 2005. The topic of the workshop this time was "Nanotechnology concerned with Environment and Energy".

In the two day sessions, the Nanotechnology Research Institute, the Research Institute for Ubiquitous Energy Devices, the Research Center for Chemical Risk Management, the Energy Technology Research Institute of AIST and participant industries of NEDO project represented Japan. China was represented by the Technical Institute of Physics, the Institute of Physics, the Institute of Chemistry, the Research Center for Eco-Environmental Science, Shanghai

Institute of Ceramics, Dalian Institute of Chemical Physics and Chemistry and researchers (Graduate School) belonging to CAS. About ten papers were presented by both sides and they discussed on themes of thermo electric conversion, hydrogen energy, fuel cell etc, in energy related session. Environment decontamination by catalyst, influence of nanomaterials to human body and other issues were actively discussed in the environment related session. A laboratory tour was conducted on the third day, and a lot of information was obtained related to the current situation of the conference theme in China.

In addition, there was an introduction including the fellowship system of AIST for the exchange of researchers and about means and funds to promote international research collaboration. There was interest for AIST fellowship from Chinese side, and opinions for promotion of future collaborations was exchanged.

