

CHINA SCIENCE AND TECHNOLOGY NEWSLETTER

*Department of International Cooperation
Ministry of Science and Technology(MOST), P.R.China*

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Headline news

Minister Wan Gang Meets with Former Italian Minister Corrado Clini

Minister Wan Gang met with Mr. Corrado Clini, former Italian Minister of Environment, Land and Sea (IMELS) in Beijing on May 21, 2013. The two sides exchanged ideas on promoting future cooperation.

Minister Wan said that MOST and IMELS had good ties in environmental protection and sustainable development. The two governments jointly promoted the business and industrial collaboration, facilitated scientific personnel exchanges and laid the foundation for long-term

cooperation.

Mr. Clini appreciated the fruits of bilateral cooperation in environmental protection and sustainable development. He briefed the Chinese minister on the progress of projects newly financed by the Sino-Italian Facility (SIF) for the program of environmental protection and hoped to expand further cooperation in electric vehicles.

Both sides hoped to build a new platform for innovation based on the MOU agreed by MOST and IMELS on

scientific and technological cooperation for Sustainable Development.

Officials from the Department of International

Cooperation and the Department of Social Development, MOST were present at the meeting.

(Source: MOST, June 6, 2013)

Supervision Enhanced for S&T Funding

On June 3, MOST and the Ministry of Finance jointly convened a video conference for strengthening supervision over science and technology (S&T) funding nationwide. The meeting was chaired by Vice Minister Wang Weizhong, and addressed respectively by Minister Wan Gang and Assistant Minister of Finance, Mr. Yu Weiping.

Minister Wan pointed out that it is the common responsibility of the scientific community to ensure the proper use and good management of the public research funds. Since the funds come from tax payers, the authorities should ensure its benefit from supporting S&T activities and the researchers should be open to public supervision and inspection for the use of the money. He also put forward five requirements to enhance fund supervision: 1) Setting up efficient supervision system as well as long-term mechanism and enhancing specific auditing and special tour inspection over the funding for research projects; 2) Strengthening social credit

management and capacity building of self-discipline by improving a social trust system; 3) Promoting assessment work on the use of public funding and establishing a performance-based evaluation system over research funding; 4) Encouraging information disclosure for public funding and accepting the public supervision over research funds; 5) Intensifying punishment over misconduct in use and management of public funding .

During the meeting, representatives from the Ministry of Education, the Chinese Academy of Sciences and Department of Science & Technology of Guangdong Province shared with the audience their experiences in research fund management. Over 200 participants from government agencies, universities, research institutes and enterprises attended the meeting in Beijing, while other relevant participants outside Beijing joined the event locally through video connections.

(Source: MOST, June 6, 2013)

S&T Management Information

MOST Launches Work of Technology Forecast

MOST started a work on technology forecast with a meeting held in Beijing on May 14, 2013, and Minister Wan Gang participated in the event. The Department of Development Planning and the Chinese Academy of Science and Technology for Development jointly

organized the meeting.

Minister Wan pointed out in his speech that technology forecast would be a fundamental work of Science and Technology (S&T) and an important tool to find strategic opportunities. It would be functioning as a

platform for synergy of the government, enterprises, universities, research institutes and technology users, as well as a means to strengthen macromanagement and transformation of government functions. Through international comparison, technology forecast could showcase China's comparative strengths and help make independent judgement and identify the priorities of S&T innovation.

Minister Wan put forward requirements for work of

technology forecast in five aspects:

- 1) Attaching great importance to technology forecast.
- 2) Doing the job well in top-level planning, thoughtful organization and interagency coordination.
- 3) Conducting a scientific selection of future technologies with their priorities.
- 4) Strengthening studies on forecast of cross-disciplinary technology and cross-sector technology.
- 5) Soliciting opinions extensively and building a social consensus.

(Source: MOST, June 8, 2013)

MOST and Beijing Join Hands for Technology Transfer

MOST and Beijing municipal government jointly issued a document in April, 2013, illustrating the policy for "National Cluster Area for Technology Transfer (CATT)", which is to be built as a new project in the west of the Zhongguancun Hi-tech Park.

The document noted the key role of technology transfer in the integration of scientific advancement and economic growth as well as the realization of innovation-driven development strategy. Intensified technology-transfer activities are needed to respond to increasingly expanded global competition and facilitate the building of an innovation-oriented country. MOST and the government of Beijing will develop favorable policies to promote more dynamic technology-transfer activities with concentrated resources gathered in CATT, and integrate and share the information of innovation services nationwide, so as to create a new situation in technology transfer and commercialization of scientific achievements.

According to the document, the project would focus on the western part of Zhongguancun Hi-tech Park to gather resources, develop new methods and connect to both domestic and international market in a bid to create a region with vibrant technology-transfer activities. Supporting measures would be delivered to facilitate the flow and integration of so-called four elements:

technologies, talents, capital and services in the cluster area, improve efficiency and service capacity, thus upgrading the mechanism, organization and operation of technology transfer in China.

It was also mentioned in the document that an online technology market would be built and the technology-transaction information platform would be improved to gather information together from various institutions and entities, including universities, research institutes, research-based enterprises, hi-tech parks, startups, industrial consortia and intermediaries. The platform would also facilitate the building of a national system for information release, quotation and payment of technology transactions so as to promote the integration of nationwide technology market with services in technology, investment, talent and innovation.

The project was identified as a priority topic in the joint working meeting between MOST and Beijing municipal government. A leading group as well as a working office would be set up to strengthen coordination and ensure daily operation of the project. MOST and Beijing would also provide preferential policy and funding support to CATT.

(Source: MOST, June 6, 2013)

Meeting Held to Promote Rural Science and Technology Work

On May 16, the Meeting on National Rural Science and Technology Work chaired by the Rural Department of MOST, was held in Beijing. About 100 delegates from science and technology departments/bureaus of relevant ministries and agencies, provinces, autonomous regions and municipalities attended. The meeting, following the spirit of the 18th CPC National Congress, is designed to further push the reform of management over rural S&T programs, enhance performance management in particular and promote rural technology-based innovation and entrepreneurship.

In his report, Chen Chuanhong, Director-General of the Rural Department, analyzed the new realities in China's agriculture and rural development, and proposed ideas to realize future development in a vision of agricultural industrialization, rural informatization, farmers' professionalization and new type of urbanization. He also put forward specific measures and requirements for boosting rural innovation and entrepreneurship.

Representatives from the local science and technology authorities, including Beijing, Liaoning, Jiangsu, Anhui, Shandong, He'nan and Xinjiang autonomous region, briefed the meeting on the progress in their own regions. Some officials from relevant departments of MOST delivered reports involving management of national S&T programs, financial management of S&T projects and clean government in science and technology. Participants also exchanged views and discussed scientific and technological work in rural areas.

This meeting will help implement the Central Government's guidelines on rural development and speed up rural science and technology innovation. The participants expressed that they would deliver the message of the meeting to local governments, and strive to create a new situation in rural science and technology work.

(Source: MOST, May 23, 2013)

Scientific Research Progress and Achievements

Raw Materials for MW-class Wind Power Blades Developed in China

Recently the company Sinomatech Wind Power Blade Co.Ltd. and its partners made progresses in carrying out the project "design and manufacturing of wind power blades with home-made raw materials" and passed technological approval.

Wind power blade is an essential component of wind power system, accounting for 20 percent of the total cost. Therefore, the domestic development of materials for wind power blades will bring down overall cost of wind power system.

Sinomatech developed technologies on special resin vacuum infusion, high-strength and high-modulus glass fibers and fabrics, foam sandwich materials, epoxy

resin adhesives and surface coating for MW-class wind power blades. Several production lines were completed, realizing scale production of the raw materials.

The combined R&D team developed techniques on molding of wind power blades with domestically developed materials, conducted strength analysis, and completed calibration and evaluation of the relevant technologies. The materials are used to produce different sizes of blades running under various circumstances by Sinomatech, Goldwind Co.Ltd., and AVIC Huiteng Wind Power Equipment Co.Ltd. The blades have received certificate after running for more than 2,000 hours.

(Source: MOST, June 7, 2013)

Chen Yu-ao Honored with Fresnel Prize

Professor Chen Yu-ao from the University of Science and Technology of China (USTC) was honored with the 2013 Fresnel Prize of the European Physical Society for his outstanding contributions to quantum manipulation based on photons and cold atoms as well as quantum information and quantum simulation. The awarding ceremony was held on May 14, 2013 at the European Conference on Lasers and Electro-Optics in Munich, Germany.

Fresnel Prize, initiated by the European Physical Society and named after Augustin-Jean Fresnel, a leading physicist in the 19th century, is regarded as the highest honor for young scientists in the field of quantum electronics and quantum optics. Every two years, two young scientists under the age of 35 would be awarded, one in the field of basic research and the other in applied research.

The 32-year-old physicist was enrolled in USTC in 1998 for quantum information studies, then he entered Heidelberg University of Germany for further study, and

got his doctoral degree in 2008. He returned to China in 2011 and his research focuses on quantum information processing based on photons and manipulated ultracold atoms.

So far professor Chen has published 38 papers on five first-class international academic journals, including Nature, Nature Physics, Nature Photonics, PNAS, and Physical Review Letters, and he was either first author or corresponding author for 15 of the papers. Based on the science citation index(SCI), the citation of these papers by others are over 1,800 times. The academics at home and abroad speak highly of his research achievements, of which a message was selected as one of ten “News Features of the year” by Nature. His work was also selected twice by the European Physical Society and the American Physical Society as the annual highlights, and five times by the Chinese Academy of Sciences and Chinese Academy of Engineering as “Top Ten Sci-tech Progress in China”.

(Source: Science & Technology Daily, April 14, 2013)

China's PV Technology Wins Special Gold Award at Int'l Exhibition of Inventions of Geneva

The solar-concentrating rooftop photovoltaic (PV) power system, developed by a team led by Lv Hui, associate professor of Hubei University of Technology, won special gold award at the 41st International Exhibition of Inventions of Geneva. This is the very first time for a Chinese mainland university to win such a prize.

This technology, by adopting principles of concentrating and spectroscopic, collects sunlight through flat Fresnel mirrors, and then splits the spectrum when projecting it onto a new-type PV material, thus making full use of the sunlight. Commonly used PV materials utilize a mere 20 percent or so of the sunlight,

while this new system can achieve a utilization rate of 44 percent. With the same area, this new system can generate electricity more than twice that by traditional crystalline silicon PV modules. While energy recovery cycle of traditional PV modules generally takes 6-7 years, this system just takes 6-7 months. Moreover, the new system's materials, batteries or Fresnel mirrors, are relatively low in cost and readily available. The cost of this technology, if put into large-scale use, could be lower than that of nuclear and thermal power.

10 patents for the technology have been filed in the U.S. and China respectively, and 3 have been granted.

(Source: Science and Technology Daily, April 28, 2013)

2nd China-Australia Climate Change Leadership Dialogue Held in Australia

The second China-Australia Climate Change Leadership Dialogue was held in Brisbane on May 2-4. The seminar was jointly sponsored by Administration Center of China's Agenda 21 (ACCA 21) and Griffith University. Experts from Chinese Academy of Sciences, Chinese Academy of Social Sciences, Chinese Academy of Agricultural Sciences and Griffith University together with diplomats from the Chinese Consulate in Brisbane were present at the Dialogue.

At the opening ceremony, Deputy Vice Chancellor Ned Pankhurst and Professor Brendan Mackey with Griffith University and Chinese Consul Cao Zhouhua delivered remarks. Deputy Director-General Peng Sizhen with ACCA 21 briefed the audience on China's S&T

achievements in climate change and made proposals on future cooperation.

During the dialogue, experts exchanged ideas on scientific research, policy making and topics for future cooperation. The research will constitute a foundation for drafting climate change adaptation policies. The scholars presented two case studies on urban planning and agricultural ecosystem. Potential projects and financing channels were also discussed.

This event was a good follow-up of the 1st seminar on climate change adaptation held last year and implementation of the interagency MOU.

(Source: MOST, May 17, 2013)

GIF Policy Group Meeting Held in Beijing

On May 16-17, the GIF Policy Group held its 35th meeting in Beijing. More than 60 people participated, including representatives of the Policy Group and Expert Group from 8 GIF members, namely China, Canada, France, Japan, South Korea, Russia, Switzerland and the U.S., and the EU, observers and relevant personnel from GIF Secretariat.

Chen Linhao, Deputy Director-General of the International Cooperation Department of MOST, and the representative from China Atomic Energy Authority attended the event as Chinese members of the GIF Policy Group. Two responsible officials from the High-tech

Department of MOST addressed the GIF Policy Group and Expert Group meetings respectively.

Participants briefed the meeting upon the progress in their countries, including the nuclear energy policies, and the latest development in nuclear technology and nuclear power industry, since the GIF Policy Group meeting in Santiago, the U.S. The meeting also discussed action items of the Policy Group, the report of the Technical Secretariat, the report and next-step actions of the Sodium-cooled Fast Reactor Task Force on Safety Design Criteria, the reports of the Education and Training Task Force and the Modeling and Simulation Task Force, and

the progress of the three subgroups of the Task Force on Strategic Planning in particular. The 36th Policy Group meeting is scheduled to be held on November 21-22, 2013 in Brussels, Belgium.

Representatives from China National Nuclear Corporation, State Nuclear Power Technology Corporation, China Institute of Atomic Energy, Institute of Nuclear and New Energy Technology of Tsinghua University and China Nuclear Energy Association attended the meeting as members of the Expert Group or as observers.



(Source: MOST, June 6, 2013)

Cooperation Projects and Channels

International Science and Technology Cooperation Base (15): School of Stomatology of Peking University

The School of Stomatology of Peking University is an institution of higher learning, and it was approved by MOST as a national-level international science and technology cooperation base in 2009. The school, which manages stomatology education, oral hospitals and oral science research, aims to become a modern, international hospital by providing high-quality teaching and services, and producing remarkable research results and high-caliber professionals.

Stomatology is a national-level key discipline. The school has several affiliated institutions, including National Engineering Laboratory, WHO Preventive Dentistry Research and Training Center, Oral Medicine Computer Engineering Technology Research Center of the Ministry of Health and National Oral Medical

Equipment Testing Center. It is also a leading member among the 24 professional committees under Chinese Stomatological Association.

The school has in-depth cooperation with the U.S.'s St. Peter's College and University of Southern California, Sweden's Astra Tech AB, and Japan's Sun Medical Co.Ltd. in the research of low-temperature plasma biology and stem cell-induced maxillofacial tissue regeneration, and that cooperation has borne fruitful results.

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International Training Workshop on Rural Medical Informatization

September, 2013

Shenzhen, China

Working Language: English

Objectives:

The aim is to provide experiences on the equalization and informatization on the health and medical services in the rural areas in China; to improve the primary health and medical care service level in the rural areas in other developing countries; to help promote deep understanding between China and other developing countries as well as good cooperation and mutual development in the reform on the medical systems,

health and medical informatization and management mode in health care services.

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International Training Workshop on Technical Task Force Entrepreneurship in Rural Area

September, 2013

Beijing, China

Working Language: English

Objectives:

The aim is to introduce China's technical task force (TTF) system, rural S&T entrepreneurship policy system, national agriculture S&T demonstration park and its operation management mechanism; to help other developing countries understand the significant function of TTF for rural S&T entrepreneurship in promoting scientific and technological achievements to be used in rural areas; to promote the TTF mechanism and other successful experiences serving for other developing

countries' development, and achieve the global goal of reducing poverty.

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