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Headline news

President Xi Applauds Success of Tianhe-2

President Xi Jinping lately made an important written instructions congratulating National University of Defense Technology on the development of a supercomputer, Tianhe-2, and extending his sincere greetings to all those who have worked tirelessly for the system.

Xi said Tianhe-2 showed that China has come to the forefront of the world in the field of supercomputer. He hoped the research team could summarize their experiences, make efforts for independent innovation and strengthen frontier research to contribute more to science and technology advancement and an innovative country.

Supported by the 863 High Technology Program, Tianhe-2 is successfully built and becomes the world's new No. 1 system with a peak performance of 54.9 petaflop per second and 33.9 petaflop floating point operations per second according to the 41st TOP500 list of the world's most powerful supercomputers. The list was announced on June 17 during the opening session of the 2013 International Supercomputing Conference in Leipzig, Germany.

(Source: Xinhua Agency, June 19, 2013)

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Inter-ministerial Coordination Group Established for National Technology Innovation Project

An inter-ministerial coordination group consisting of MOST, National Development and Reform Commission, Ministry of Finance and 12 other agencies and institutions was founded and held its first meeting on June 7, 2013. With coordination among the group members and pooling of resources, the group will work for innovation of enterprises through a set of policies on science and technology, industrial development, taxation and finance.

At the meeting, the group identified some major tasks and measures, which are related to enhancing innovation capacity of enterprises, promoting synergy of enterprises, universities and research institutes, pooling innovation elements to enterprises and creating a sound ecosystem for innovation. Efforts will be made to increase the R&D-to-sales ratio in large and medium-sized enterprises to 1.5 percent by 2015. The investment of R&D and innovation by leading companies will reach the international level. The invention patent applications and grants will double. A batch of innovative enterprises with strong international competitiveness will grow up. The core competitiveness in major industries will upgrade remarkably. The technology innovation system will be formed with enterprises as the major player, market as the guidance and research as a support.

Vice Minister of Science and Technology Wang Zhigang emphasized in his concluding remarks that reform will be carried out to strengthen the role of enterprises as the major player of innovation. Innovation capacities of enterprises will be enhanced as a core task through improved mechanism, good innovative conditions and environment. The members of coordination group will strengthen their coordination to promote the National Technology Innovation Project. The ministerial officials with NDRC, MOF, Ministry of Education, Ministry of Human Resources and Social Security, People's Bank of China, Chinese Academy of Sciences, All-China Federation of Trade Unions and All-China Federation of Industry and Commerce also delivered remarks at the meeting.

The Inter-ministerial Coordination Group on National Technology Innovation Project was founded on June 7, 2013.

(Source: MOST, June 18, 2013)

Program on Promoting Innovative Talents Fully Implemented

Recently MOST and seven other ministries jointly issued the implementation scheme for *Program on Promoting Innovative Talents,* which marks the actions have started.

The scheme sets clear goals for the national program by 2020: (1) 100 labs to be built for scientists conducting frontier research; (2) 500 innovation teams to be set up in priority areas; (3) 300 pilot training bases to be approved for innovation talents; (4) Supporting and training 3,000 young and middle-aged leading scientists; (5)Supporting 10,000 science-based startups.

Through actions with the goals, more influential research findings in the world will be achieved, and capacity in original innovation of the science community and technology development of the industry will be remarkably increased.

Apart from the focus on talents and team leaders, the implementation scheme also includes strict requirement for the innovation team. The team could vary from 5 to 15 members, but the personnel structure should be stable to ensure the continuity of the work. The program is not set to honor individuals or innovation teams as lifelong laureates, but to support their research and innovation activities.

(Source: MOST, July 2, 2013)

Scientific Research Progress and Achievements

Wang Yaping Becomes China's First "Space Lecturer"

Ms. Wang Yaping, assisted by her two colleagues travelling in Shenzhou-10 spacecraft, delivered a science lecture on space knowledge from China's highest podium----Tiangong-1 space station, which is over 300km away from the Earth.

In the 40-minute lecture, the astronauts showed mass measurement, pendulum movement, twirled gyroscope, making a water film and a floating water ballon, and so on, demonstrating how the features of physical movement and surface tension of liquid change due to weightlessness. They also took questions from the audience on the ground. This telecast lecture was watched by tens of millions of students and teachers from about 80,000 middle schools across China.

Ms. Wang was born and raised in the rural area of Yantai city, Shandong province of China, and entered Changchun Flight Academy as a pilot candidate in 1997. As one of the seventh group of female pilots in China, she can fly four kinds of aircraft and took part in the important missions for Beijing Olympic Games and Wenchuan earthquake. In 2010, she became one of China's second batch of astronauts and was further selected as a crew member of the Shenzhou-10 manned space mission in April 2013. On June 20, Wang Yaping became the world's second and China's first "teacher in space".

(Source: Science & Technology Daily, June 21, 2013)

New Passage for Polysaccharides Absorption Discovered by Chinese Scientist

At the 2013 International Symposium on Chemical Glycobiology in Shanghai on June 29, the Infinitus Joint Lab for the Research of Chinese Herbal Polysaccharides in the Shanghai Institute of Meteria Medica (SIMM) released a new finding that herbal polysaccharides, such as lentinan, can be intactly absorbed into the blood by the intestinal lining through a special passage, and then delivered to the whole body to exert their biological and physiological functions.

As one of the most abundant substances in nature, polysaccharides widely exist in animal cell membranes and the cell walls of plants and microorganisms. Many pharmacological and clinical researches have proved the functions of polysaccharides, especially Chinese herbal polysaccharides, in terms of immune potentiation, hypoglycaemic activity, protecting gastrointestinal system, anti-aging, and so on.

The researcher Ding Kan from SIMM started to work with Infinitus (China) company in 2009 on polysaccharides absorption. Their latest achievements show that polysaccharides can go into the cells of intestinal lining through a protein called clathrin, and then to the capillaries and finally to the different parts of the body. By different reactions with the receptors on cell surfaces, polysaccharides can then fulfill their properties.

The findings have not only attracted much attention from international experts in this field, but have also been recognized by the Consortium for Functional Glycomics and the International Glycoconjugates Organization. The achievements provide important reference to further clarification on polysaccharides' fulfillment of their therapeutic properties, give novel evidence concerning the effectiveness of their oral administration and create potentials for targeted therapies based on polysaccharides.

(Source: Science &Technology Daily, June 30, 2013)

New Tech Developed for Shock Absorption on Railway Tracks

A core technology for shock absorbing railroad bed has been developed in China, which can greatly reduce railway shocks near the places with special requirements, such as the laboratories equiped precision instruments, hospitals, schools and cultural relics, etc.

Dr. Wang Anbin’s team, hired by China Shipbuilding Industry Corporation, has achieved breakthroughs in a group of key technologies in non-linear stiffness, dynamic vibration absorber, vibration separation in roadbed as well as specification design to develop removable and safe shock absorption roadbed with indigenous intellectual properties. In addition to shock absorption, the new system is also highly accurate, quite safe and relatively cheap. It is convenient and quick to be installed in tunnels and overpasses, and can be replaced quite easily, thus becoming a good solution for constructions of urban rail transport and high-speed railway in China.

(Source: Science &Technology Daily, June 13, 2013)

Symposium on Dragon Program Held in Italy

The 2013 Dragon Symposium, an academic event under the MOST-ESA China Dragon Cooperation framework, took place on June 3-7 in Italy. Director General Liao Xiaohan from the National Remote Sensing Center of China and Director Frederic Nordlund from ESA (European Space Agency) addressed the opening ceremony on behalf of the organizers.

A total of 187 scientists working on 51 joint research projects attended the academic annual meeting, which was the first of its kind since the launching of Dragon Programme-3. About 100 presentations were delivered by the participants and 50 posters and paper introductions were given by young researchers in a bid to showcase the latest collaboration progress. In addition, the management team of the Dragon Programme met to discuss the next step activities.

The Dragon Programme is the largest international cooperation project for China in the field of remote sensing. It started in 2004 and Phase I of the project lasted for four years. Dragon-3 began in 2012 to include 51 cooperation projects, such as forest observation, topographic mapping and CO2 assessment in ecosystems, and engage over 400 renowned scientists and young researchers. Under this framework, MOST and ESA have achieved a batch of advanced research outcomes through collaborative research, training courses and sharing of satellite data. The programme has also facilitated and expanded the application of remote sensing technologies in China.

The 2013 Dragon Symposium was held in Palermo Sicily, Italy.

(Source: MOST, June 24, 2013)

Seminar on S&T Policy and Management for Developing Countries Held in Beijing

On June 13th, the opening ceremony of the Seminar on S&T Policy and Management for Developing Countries was launched in Beijing. The Seminar was hosted by the Department of International Cooperation of MOST. The participants included 20 officials from departments of S&T management of 12 countries, namely Costa Rica, DPRK, Laos, Cambodia, Indonesia, Thailand, Philippines, Singapore, Egypt, Nigeria, Romania and Poland.

The seminar aimed at facilitating exchanges among

S&T authorities of developing countries, improving S&T management and promoting innovation. The diplomats from DPRK and Romanian embassies in China and the representatives of Chinese organizers also attended the opening ceremony.

In the opening remarks, Mr. Ma Linying, Deputy Director-General of International Cooperation of MOST pointed out that China, as a developing country, has always been giving prominence to S&T cooperation and exchanges with developing countries and inter-governmental S&T cooperation, and China has implemented a number of S&T Partnership Programs for developing countries, so as to jointly enhance S&T innovation capacity and promote the sustainable development.

Mr. Jose David Murillo, Science Counselor from the Embassy of Costa Rica in China, delivered a speech. He thanked MOST for offering this opportunity of mutual learning and appreciated China's efforts in promoting S&T cooperation among developing countries. He also hoped this Seminar would help participants better understand China's S&T policies and management models and facilitate S&T exchanges and cooperation among developing countries.

Mr. Sun Hong, Director-General of China Science and Technology Exchange Center and Mr. Vilaysone Bouphalad with the Ministry of Science and Technology of Laos, delivered speeches respectively on behalf of the organizer and the participants.

The twenty-day seminar would be held in Beijing and Shanghai, with discussions on China's S&T development planning and management system, hi-tech parks, S&T management for agricultural and social development, international S&T cooperation, socioeconomic progress and livelihood improvement. Participants would visit hi-tech parks like Zhongguancun Park in Beijing and Zhangjiang Park in Shanghai, the Chinese Academy of Agricultural Mechanization Sciences and Tongji University.

(Source: MOST, June 25, 2013)

2013 China-New Zealand Scientist Exchange Program Officially Launched

The China-New Zealand Scientist Exchange Program has been implemented for 4 years since 2009. The Program was initiated in accordance with the agreement signed by MOST and New Zealand's Ministry of Business, Innovation and Employment (MBIE) (i.e. former New Zealand Ministry of Research, Science and Technology). It aims at facilitating exchanges between young scholars from China and New Zealand and encouraging scientists from both sides to participate in joint research projects, thus laying a solid foundation for a long-term bilateral S&T cooperative relationship. The agreement was renewed in April this year, increasing the

number of visiting scholars to 10.

On June 4, the launching ceremony of the Program in 2013 was held in Wellington, the capital of New Zealand. Mr. Xu Jianguo, Chinese ambassador to New Zealand and Dr. Dianne McCarthy, CEO of Royal Society of New Zealand attended the ceremony and delivered speeches. Ms. Karla Falloon, Director-General of the International Cooperation of MBIE and Dr.Marc Rands Director-General of the International Cooperation of Royal Society were also present at the ceremony. Nine young scholars from Chinese Academy of Sciences, Zhejiang University, China Agricultural University, Tongji University and East China Normal University were selected to participate in the Program 2013 in New Zealand. They made presentations on their research and collaborative projects respectively.

After the ceremony, the Chinese scholars would spend 2 to 4 weeks in their host institutes such as Royal Agricultural Society of New Zealand, Massey University, Lincoln University, Landcare Research, University of Auckland, Auckland University of Technology and Victoria University, carrying out joint research with their New Zealand counterparts in agriculture, environmental S&T, biotechnology, medical science and nanotechnology. In the second half of this year, New Zealand scholars will visit China.

(Source: MOST, June 18, 2013)

Cooperation Projects and Channels

International S&T Cooperation Base (16): Academy of Disaster Reduction and Emergency Response

The Academy of Disaster Reduction and Emergency Response is a research institute approved by the Ministry of Civil Affairs (MCA) and the Ministry of Education (MOE). It was established in 2006 on the basis of National Disaster Reduction Center, MCA and the Key Laboratory of Environmental Change and Natural Disaster, MOE. It is now based in Beijing Normal University (BNU).

In 2007, the Academy was approved by MOST as an international S&T cooperation base of disaster prevention and reduction and sustainable development. By building new research platforms for international cooperative research, the Academy aims at facilitating innovative research in areas related to comprehensive disaster reduction and emergency response. It is dedicated to establishing a simulation system of emergency response, carrying out comprehensive demonstration and training, improving policies and regulations as well as launching disaster monitoring and reduction capacity assessment through 3S technologies (RS, GIS and GPS) and other technologies. In the Academy, there are 59 permanent staff, 8 post-doctorate researchers and nearly 200 graduate students.

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International Training Workshop on Solar Energy Application Technology

October, 2013

Lanzhou, China

Working Language: English

Objectives:

The aim is to help other developing countries and its people to realize the common development and utilization of solar energy so as to reduce emissions and air pollution; to promote bilateral and multilateral international cooperation and exchanges in science and technology; to establish a broad-based international cooperation with the related international agencies, government departments and research institutions.

Organizer:

Gansu Natural Energy Research Institute

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International Training Workshop on Animation Technology Development and Application

October, 2013

Fuzhou, China

Working Language: English

Objectives:

The aim is to help the participants learn about the status quo and trends of international animation industry and China as well; to master related technologies of animation; to help other developing countries cultivate talents in the field of animation industry.

Organizer:

Fujian Provincial Science & Technology Exchange Center with Foreign Countries

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(Editor's Note: All news in the issue are translated from Chinese texts for your reference. They are subject to checks and changes against official release of original Chinese or English texts.)