

CHINA SCIENCE AND TECHNOLOGY NEWSLETTER

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Headline news

Outline of the Opinions on Deepening the Reform of Scientific and Technological System and Speeding up the Building of National Innovation System

(Note: This is only a draft of the Chinese text translated for your reference. It's subject to checks and changes against official release)

CPCC Central Committee and the State Council recently have issued the Opinions on Deepening the Reform of Scientific and Technological System and Speeding up the Building of National Innovation System, in order to fully implement the Outline of the National Program for Medium -and Long -Term Scientific and Technological Development (2006-2020), bring into full

play the role of science and technology in underpinning economic and social development, and accelerate the building of an innovative nation.

I. Fully recognizing the importance and urgency of deepening the reform of S&T system and accelerating the building of national innovation system

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In facing of the new situation and new requirements, China's innovation capacity remains inadequate and there is a structural misalignment between its science and technology systems and mechanisms and its needs for economic and social development and international competition, as prominently shown in the following aspects: 1) the status of enterprises as the major player of technological innovation has not been truly established; collaboration among enterprises, universities and research institutes remains weak; technology and economy are not truly integrated; original S&T results are relatively few; and there is a lack of self-sufficiency for key technologies; 2) allocation of S&T resources is dominated by administrative considerations, scattered, duplicated, inefficient and in a way that's not encouraging accessibility and sharing; S&T projects and funds are managed irrationally, leading to low rates of commercialization of research results; 3) evaluation systems for S&T results are yet to be designed in such a way as to effectively guide research efforts into areas where they are most needed; efforts to build a research culture that values integrity and innovation are lagging; and researchers are not effectively motivated to bring their initiative and creativity into full play. All these problems have become important constraints on technological innovation and obstacles to the improvement of China's overall national strength and international competitiveness.

II. Guiding ideology, principles and goals for deeping the reform of S&T system and accelerating the establishment of national innovation system

III. Strengthening the status of enterprises as the major performer of technological innovation and establishing a closer tie between S&T and economy

- ⊙ Establishing a system whereby enterprises play a leading role in promoting industrial technological R&D and innovation.
- ⊙ Enhancing the capacity of research institutes and institutions of higher learning to support economic

and social development.

- ⊙ Improving the mechanism to enable science and technology to support emerging industries with strategic importance and the upgrading of traditional industries.
- ⊙ Improving the mechanism to enable science and technology to promote agricultural development, improve livelihood and strengthen social management innovation.

IV. Strengthening coordinated deployment and collaborative innovation and improving the overall performance of the innovation system

- ⊙ Promoting coordinated development of the innovation system.
- ⊙ Improving the mechanism for regional innovation.
- ⊙ Strengthening access to and sharing of S&T resources.

V. Reforming the S&T management system and promoting the scientific management and efficient utilization of resources

- ⊙ Strengthening overall S&T coordination.
- ⊙ Promoting the reform of the S&T project management system.
- ⊙ Improving the S&T fund management system.
- ⊙ Deepening reform of the S&T evaluation and incentive system.

VI. Improving the talent development system and stimulating the enthusiasm and creativity of scientists

- ⊙ Coordinating the development of all types of innovation talents and putting in place a sound talent incentive mechanism.
- ⊙ Strengthening research integrity and fostering an innovation culture.

VII. Creating an enabling environment to provide a strong guarantee for S&T innovation

- Developing and improving relevant laws, regulations and policies.
- Strengthening the opening up and cooperation in science and technology.
- Strengthening leadership and organization.
- Defining roles and responsibilities.
- Making overall arrangements and proceeding steadily.

VIII. Enhancing leadership and proceeding steadily

S&T Management Information

The “Leading Group of State Scientific and Technological Reform and Innovation System Construction ” Established

On July 30, the “Leading Group of State Scientific and Technological Reform and Innovation System Construction” held its first meeting in Beijing. Liu Yandong, State Councilor and Head of the “Leading Group of State Scientific and Technological Reform and Innovation System Construction”, presided over the meeting and made a speech about the Implementation of Division of Tasks of the “Opinions of CPC Central Committee and the State Council on Deepening the Reform of Scientific and Technological System and Speeding up the Building of National Innovation System”. Liu pointed out that it must strengthen overall plan and design of the reform, firmly grasp the key aspects that can promote the close connection of technology and economic and social development, innovate the technological management system and mechanism and introduce various measures to carry the reform forward. Liu stressed that all regions and departments must develop specific programs based on the practical situation, introduce and launch corresponding policy measures as soon as possible and strengthen the tracking, evaluation and supervision of the implementation situation to make sure a smooth



completion of various tasks. In addition, it must improve coordination mechanism and strengthen cooperation and coordination between departments. According to sources, the major tasks of the "Leading Group of State Scientific and Technological Reform and Innovation System Construction" are to organize and guide the reform of scientific and technological system and construction of innovation system, discuss about key policy measures, co-ordinate major issues and sum up the experiences of promotion work. The members of the leading group come from 26 departments and units of government, military and the public.

(Source: Xinhuanet)

China Plans to Launch Eight Ocean Satellites

Jiang Xingwei, Director of the National Satellite Oceanic Application Center, told the reporter in the interval of the Unveiling Ceremony of the State Oceanic Administration's Key Laboratory of Digital Ocean Science and Technology & China's Third Forum of "Digital Ocean" that according to the plan, China will launch eight ocean satellites by 2020, including four ocean color satellites, two ocean dynamics environmental satellites and two radar satellites on both ocean and land. The above scenarios are from the approved "Development Plan of Land and Sea Observation Satellites" which is led by the Ministry of Land and Resources. Up to now, China has launched three ocean satellites including two Haiyang-1 satellites (namely ocean color satellites)

and one Haiyang-2 satellite (ie, ocean dynamics environmental satellite). It is reported that with the application of satellite remote sensing technology, the state waters dynamic surveillance and monitoring management system has gradually established and perfected the long-term mechanism of remote sensing monitoring in the doubtful areas of sea waters, the regional seas and major construction projects. However, compared with developed countries, China's ocean satellite undertakings is still in its infancy. The design life of China's ocean satellites has a big gap with some European and American countries.

(Source: Science and Technology Daily)

Important Achievement Made in Projects of R&D and Industrialization of Casting Aluminum and It's Alloys

Today, three national planning projects, which the Ministry of Science and Technology of China entrusted the Science and Technology Department of Guizhou to implement, smoothly passed the check of experts of the Science and Technology Department of Guizhou in Guiyang. The three projects are the "Technological Development and Industrialization of Directly Casting High-end Aluminum and Aluminum Alloy Ingots with Electrolysis of Virgin Aluminum", "R&D and Industrialization of New High-strength Cast Aluminum Alloy Materials" and "R&D and Industrialization of New-type Steel Hot-dip Aluminum Alloys".

The three approved planning projects belong to the project of "Developing High Performance Aluminum Alloys and Related Manufacturing" that were supported by the state, and organized and implemented by the Science and Technology Department of Guizhou in 2007.

The project developed a series of new materials above 500MPa, fundamentally broke through the restriction of traditional known technology on the development of light and strong aluminum alloy materials and overcame the technical problems hindering the innovation and development of China's aluminum industry. With the implementation of the project, China has not only

established pre-production line with an annual output of 1,500 tons of billets (castings) and production line with an annual output of 100,000 tons of aluminum alloy ingots, but also set up the academician workstation,

provincial engineering technology research center and technical innovation alliance.

(Source: Science and Technology Daily)

Electricity Generation Experiment of Tower-type Solar Thermal Power Station has Ended in Success in Beijing

After six years of hard work, Beijing Yanqing Badaling Solar Thermal Power Station has finally succeeded in electricity generation August 9, 2012. It is a significant independent innovation result in the field of China's solar thermal power generation, making China as the fourth country to achieve large-scale solar thermal power generation after the United States, Germany and Spain. Compared with solar photovoltaics, the solar thermal power generation has unique advantages as it is used in large power stations due to the thermal storage, relatively stable and adjustable electricity output and less environmental impact. Eleven research and development

units independently completed the preliminary design, implementation design, equipment installation and debugging of the tower-type solar thermal power station and realized 100 percent of equipment localization. Through the implementation of 863 Plan, the Institute of Electrical Engineering under Chinese Academy of Sciences, which is responsible for the project, also established one world-class large-scale R&D base of solar thermal power technology, and a batch of important scientific experiment platforms in Yanqing.

(Source: www.most.gov.cn)

The Second Clinical Trial Stage of Independent Development of AIDS Vaccine

After optimization, ethical review, test preparation and recruitment of respondents, the second stage of AIDS vaccine clinical trial of key scientific and technological project in China, has launched in Beijing YouAn Hospital under the Capital Medical University today. It is the first time that the research of AIDS vaccine by using replicative live viral vectors entered clinical trial stage and thus accepted high attention of the international AIDS vaccine field. The research of AIDS

vaccine is one of the major challenges faced by global scientific community and at present many countries are adopting different methods to make research on it. The Chinese Center for Disease Control and Prevention and National Vaccine & Serum Institute attached to China National Biotec Group and China National Pharmaceutical Group Corporation jointly developed by using new methods the AIDS vaccine with completely independent intellectual property rights. The first stage

of AIDS vaccine clinical trial was finished during the 11th Five-Year Plan(2006-2010), showing good safety and immunogenicity, and can produce anti-HIV body fluid and cellular immune response in the bodies of respondents. In late March of 2012, the State Food and

Drug Administration has approved the second stage of AIDS vaccine clinical trial, which ranks fifth in the list of global eight AIDS vaccines published by Bill and Melinda Gates Foundation.

(Source: Science and Technology Daily)

Breakthrough Progress Made in Research of Drilling Engineering of Environmental Sciences in China

With a drilling depth of 666 meters, 10 years of hard work and using the methods of paleomagnetism, carbon-14 dating and orbital tuning, the chronosequence of ancient lake sediments in Heqing of Yunnan was established, the history of Indian summer monsoon changes in Pleistocene (during the past 2.6 million years) was reconstructed and the Indian summer monsoon kinetic theory between glacial and interglacial periods was proposed, filling in the blank of related research field. The research paper was published on

internationally renowned magazine “Science” on August 5, 2011. Led by An Zhisheng, academician of Chinese Academy of Sciences, of State Key Laboratory of Loess and Quaternary Geology, the research group has obtained significant original achievements. The “Science” of the same issue commented as “the record has provided a wealth of information and given a fascinating explanation”.

(Source: Science and Technology Daily)

Lenovo world's largest PC seller

Computer maker's share in global market rises to 15.7% in 3rd quarter

China's personal computer manufacturer Lenovo Group Ltd overtook the US-based Hewlett-Packard Corp in the third quarter to become the largest seller of personal computers in the world measured by shipments, the IT research company Gartner Inc said on Thursday.

Lenovo's global market share was 0.2 percentage points higher than HP's in the quarter, marking the first time

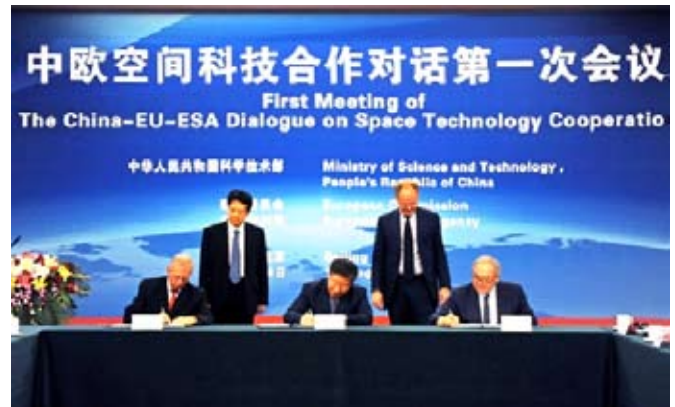
Lenovo has held the largest share of the PC market, according to the Gartner report.

Lenovo, which acquired International Business Machines Corp's PC unit seven years ago, made 15.7 percent of all PC shipments in the third quarter, while HP made 15.5 percent, Gartner said.

(Source: China Daily)

New Orientation for China-Europe Space Technology Cooperation Determined

To implement the spirits of the 14th China-EU leaders' meeting, the first China-EU Space Technology Cooperation Dialogue was held by the Ministry of Science and Technology, the European Union and European Space Agency in Beijing on August 14, 2012 under the active promotion of Wan Gang, Science and Technology Minister, and Antonio Tajani, Vice EU President, definitely establishing the China-EU dialogue mechanism of space science and technology cooperation. The meeting was presided over by Cao Jianlin, Vice Minister of Ministry of Science and Technology, and participated in by Paul Weissenberg, Deputy Director-General of the General Agency of Enterprise and Industry under the European Union, and Jean Jacques Dordain, Director of European Space Agency. Both sides had full exchanges in five fields of satellite navigation,



earth observation, space science, space research and technology and space exploration, acknowledging the results of China-EU space technology cooperation and putting forward new orientation to carry out more extensive cooperation in the area of space science and technology.

(Source: www.most.gov.cn)

Introduction on International Scientific and Technological Cooperation Base

China Iron and Steel Research Institute Group is one of the International Scientific and Technological Cooperation Bases in China. The base is under the management of China Iron and Steel Research Institute Group and supported by the research and development institutions and enterprises affiliating to the Group. It actively carries out international scientific and technological exchanges and cooperation and has completed hundreds of cooperative items with more than 10 states and regions, involving such fields as new metal materials and technology, analysis and testing of steel and metallurgy.

The Group had cooperated with the research institutes

and universities of Sweden between 1982 and 2000, finishing nearly 20 scientific and technological subjects. It has established cooperative relations with the United States, Japan, Germany and Sweden, selling the products to Central Asia, South Asia and Europe, achieving good results.

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China Iron and Steel Research Institute Group (The Base)

(Source: DIC, MOST)

The 9th Optics Valley of China International Optoelectronic Exposition and Forum to be held

The 9th Optics Valley of China International Optoelectronic Exposition and Forum (OVC Expo 2012), jointly organized by Ministry of Industry and Information Technology, Ministry of Science & Technology, National Development and Reform Commission, Ministry of Education, State Intellectual Property Office, State Bureau of Surveying and Mapping, Chinese Academy of Sciences, Chinese Academy of Engineering, China Council for the Promotion of International Trade and the People's Government of Hubei Province, is scheduled to be held at Wuhan Science & Technology Convention and Exhibition Center from Nov. 2nd to Nov. 5th, 2012.

The OVC Expo has been successfully held for eight sessions since it was established in 2002, with an exhibition area of more than 35,000 square meters. The OVC Expo 2012 includes six special exhibition

areas, 12 forums and procurement dealing activities with international standards and five distinctive activities, which will give a comprehensive display of the latest technologies and products in the fields of laser, optical communications, optoelectronics, geo-spatial information, the digital home, as well as LED lighting and display. Well-known experts, scholars and business people at home and abroad will be invited to participate in the Expo, exploring the development of the optoelectronics industry.

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(Source: the Torch High-tech Industry Development Centre of the Ministry of Science & Technology)