Content

Science News from Chinese Media during the period of June 2005
collected and compiled by the Helmholtz Beijing Office

Overview

Helmholtz Sino-German Workshop in Beijing:

The Helmholtz Sino-German Workshop on Cancer and Infectious Disease was hold in Beijing between 05-08. 06. It was very successful. 16 DKFZ and 16 GBF colleagues have come and attended this event. 41 oral presentations were made during the 3 days workshop, of which, 25 were given by our Helmholtz colleagues and 16 were by local Chinese. Nearly 200 Chinese working in the relevant research fields participated in this workshop. They are not only from our partner organization, the Chinese Academy of Medical Sciences, the most of them are actually from the top universities, such as Beijing University and Tsinghua University, and also from the Chinese Academy of Sciences and the Chinese Military Academy of Medical Sciences. There are also researchers who came on their own cost from Xian, from Wuhan. For almost all the time, there were more than 120 enthusiastic visitors in the audience.

Along with this workshop, a MoU between Helmholtz and CAMS was signed by Prof. Balling and Prof. Depei Liu, President of CAMS.

Dr. Efferth from DKFZ and Dr. Schughart from GBF have given each a presentation about their PhD program, and DKFZ has successfully chosen 3 PhD candidates from the 10 pre-selected applicants.

Prof. Bannasch has chaired the first DKFZ Chinese Alumni Meeting and has announced the names of 3 winners from the Alumni poster-presentation. All the colleagues have had a wonderful time in Beijing, the assistance of our Helmholtz Office in organizing this workshop has been strongly acknowledged.

From the presentations, from the discussion with the Chinese during the workshop and from the laboratory visit, our colleagues have had very positive impression about China's great progress in the last couple of years. There are indeed many things that we can work jointly and achieve added value for both sides. Some colleagues have after this workshop visited Shanghai, Xian and Wuhan. It is for sure, they have had similar impressions also in the other cities. The change in China is spectacular, certainly, there is still a 10 year gap for the Chinese to catch up in the area of fundamental research.

For interesting photos from the workshop, please go to: http://www.helmholtz.cn/new/photo.htm.

The temperature of June in Beijing is getting higher, therefore more concern is about China's energy consumption and energy industry. Energy has been recognized as one of the most important factors for maintaining the further development of the economy. Now Nuclear Engineering, wind power project, and hydrogen energy obtained a lot of emphasis.

Another attention is the problem of environment, which is of great political importance. In the field of earth and environment, now the main focuses include recycling and the protection of environment. For example, since sandstorm in northern part of China is more and more severe, the related research is in urgent need.

Concerning the research in Health, AIDS is still in the center research interest for the scientist, and some kind of international cooperation came into being. Another interesting point is that the Traditional Chinese Medicine (TCM), which is also more and more popular in the western world nowadays, has stepped into sight of us.

Another exciting news is that the China and EU have started real cooperation in the Galileo Program, and let us see what will happen in the near future.

As we did last month, again we have collected some workshops information and list them by the end of this collection.

For more specific information, please contact:

Helmholtz Association of National Research Centres
Beijing Representative Office
Tel: 00-86-10-6590-7866
Fax: 00-86-10-6590-7867
Email: info@helmholtz.cn

www.helmholtz.cn

1 Science News

1.1 Energy

13th International Conference on Nuclear Engineering opened in Beijing
(MOST, 2005-06-01)

In the morning of May 17, the 5-day 13th International Conference on Nuclear Engineering opened in Beijing. Nearly a thousand Chinese and foreign scholars and officials from the field of nuclear energy gathered to discuss how to realize "revitalization of nuclear power". This is the largest international exchange conference in our country in the atomic energy sector and it is also the first time for this conference to be held in a developing country. ZENG Peiyan, Vice Premier of the State Council sent a message of congratulation to the conference and MA Songde, Vice Minister of Ministry of Science and Technology (MOST) attended the conference.

At the opening ceremony, ZHANG Huazhu, Vice Chairman of Commission of Science and Technology and Industry for National Defense and Director-General of China Atomic Energy Authority made a briefing on China's nuclear power development strategy, saying that "by 2020, the installed capacity of China's nuclear power will reach 40 million kilowatt or so, 4% of the electrical installed capacity of the whole country and in the coastal areas with developed economy and centralized electric burden, nuclear power will become an important support for the electric structure".

At present, the installed capacity of nuclear power of our country is 8.7 million kilowatt, accounting for approximately 1.6% of the total installed electric capacity of the whole country.

The experts present at the conference are very optimistic about the development of nuclear power in the next dozens of years. An official from the International Atomic Energy Agency predicted that, by 2050, it will be possible that 95% of the world population use nuclear power. He indicated that "the increase will be mainly in the developing countries, especially the developing countries of Asia".

The factor affecting the popularization of nuclear power is chiefly the anxiety over the safety of nuclear power. The serious nuclear leakage accident of Chernobyl Nuclear Power Plant is still haunting the people. An official from the World Nuclear Association believed it necessary to foster "Nuclear Safety Culture" among the public. At the same time, he emphasized that "only by making no mistakes can we let the public believe us. The occurrence of one accident will have the efforts of many years wasted and the revitalization of nuclear power postponed over 15 years."

China initiates million-KW wind power project
(People's Daily, 2005-06-01)

(The Great Wall in Anxi of Gansu Province, China)

A 1,000,000-kilowatt wind power plant, currently the largest in China, has been initiated in Anxi County of northwest China's Gansu Province.

With an investment of RMB eight billion yuan, the project will play an important role in the development of new and clean energy resources and easing the power shortages in the eastern and western areas.

China to build 30-million-kw nuclear power units by 2020

(Xinhua Net, 2005-06-07)

China's installed capacity of nuclear power will reach 40 million kilowatts by 2020, accounting for 4 percent of the total installed capacity of the country, said sources with the China National Nuclear Corporation (CNNC) Monday.

By then, nuclear power will account for 6 percent of the total generating capacity of the country. This means than China will have to build about 30-million-kilowatt nuclear power units and invest 400 billion yuan (48.3 billion US dollars) in the next 15 years, said Kang Rixin, General Manager of the CNNC.

Launched in the 1980's, China has 19 nuclear power generating units that are complete, under construction or received building clearance. With an installed capacity of 16 million kilowatts, nuclear power accounts for 2.3 percent of the country's total generating capacity.

As for technological adoption, Kang said that the CNNC will insist on its own technological capacity as well as cooperating with overseas counterparts.

By importing advanced technology from overseas, CNNC will try to realize the localization of those technologies, said Kang.

China's choice for nuclear power is decided by its economic development and natural resources distribution, said Kang.

According to Kang, building nuclear power generation plants in China's eastern and southern coastal regions, which boast the prosperous economy but scarce energy resources, is the best choice for China. The construction will help relieve the tense situation in energy supply and demand, improve its energy supply and use structure and to improve the environments of the country.

He also emphasized that the goal to have the installed capacityof nuclear power accounting for 4 percent of the total of the country is just a phase objective of China based on its economic development, processing capability and technological level.

Nuclear power generation should have a due role but not a key role in relieving China's tense energy demand and supply situation.While increasing the energy supply capacity and efficient use of energy resources is more important for China, said Kang.

According to Kang, China has designed a program for nuclear power development which has a balanced plan and overall objective for China's nuclear waste disposal and treatment.

As for the issues of nuclear power safety, Kang said that all nuclear generation plants in China were built in strict compliance with the standards of the International Atomic Energy Agency of the UN and other related international institutions.

So the safety of China's nuclear power plants is ensured, said Kang.

China now has nine nuclear generation units in operation including five in Qinshan Nuclear Power Plant in east China's Zhejiang Province and four in Daya Bay and Ling Ao Nuclear Power Plant in south China's Guangdong Province.

The two units in Tianwan Nuclear Power Plant of east China's Jiangsu Province is under construction. The two units in Qinshan Phase II, the two units in Lingdong Nuclear Power Plant in Guangdong, the two units in Sanmen Nuclear Power Plant in Zhejiang and the two units in Yangjiang of Guangdong has got the permission from the central government to be built.

China's nuclear power design capability scales new height

(People’s Daily, 2005-06-08)

Kang Rixin, managering director of China National Nuclear Corporation (CNNC), said on June 6 that China has made major progress in the second generation of the self-designed nuclear power plant.

Following the completion of the initial design of CNP 1000, a China's self-designed million-kilowatt PWR (pressurized water reactor) nuclear power plant, by Shanghai Nuclear Engineering Research and Design Institute, the preliminary design of CNP 1500 taken by Beijing Institute of Nuclear Engineering is also nearing completion. So far, China has formed a series of nuclear power plants such as CNP 300, CNP 600 as well as CNP 1000/CNP 1500 with Chinese intellectual property rights.

In terms of economic efficiency, the power cost could be brought under five US cents per kilowatt-hour once the CNP 1000 were put into mass operation. According to the evaluation by experts, CNP 1000 is superior to all the domestic nuclear power plants in operation, and some of its indexes are even better than those of the second-generation international nuclear power plants in terms of performance, economic efficiency as well as safety.

The nuclear power units built and those to be completed stand at 19, with the total installed capacity hitting 16 million kw.

China and Spain cooperate in wind power generation

(China News, 2005-06-08)

China Academy of Launch Vehicle Technology (CALT), Spain ACCIONA (EHN's parent company) and INCEISA officially signed two cooperative agreements in Beijing Tuesday to jointly establish two joint ventures in Beijing and Jiangsu Nantong City, respectively.

The joint venture in Beijing takes a total investment of 125 million RMB (US$1 million) and will be mainly responsible for wind power marketing, technological research and development, management, human resource training, pre-sale and after-sale services. The joint venture in Nantong represents a total investment of nearly US$30 million and will be mainly responsible for wind turbine production.

CALT, ACCIONA and INCEISA expressed their hope to render full support to developing these two joint ventures into a "wind power titan," striving for the leading position in wind power arena in China and even the whole world, and making profound contributions to China and the world in the field of renewable energy sources.

According to the agreements, CALT, ACCIONA and INCEISA will focus on two fields in their cooperation. The first is wind power generation. EHN will provide CALT with technological support to produce 1,500kw wind turbines in order to stimulate localization of production of wind turbines and main wind turbine components. The second field is development, promotion and localization of other forms of renewable energy sources in China, with emphasis on straw energy generation and diesel oil production with bio-technology.

CAS to beef up the development of its field station networks
(CAS, 2005-06-10)

CAS is to greatly enhance its networks of field stations across the country, with an objective of building them into a cluster of highly open laboratories for research and long-term observation with the state-of-the-art equipment, a demonstration base for the optimal management of high technologies, and a key component of the earth-monitoring system.

The announcement was made at a CAS conference on field stations on June 6 in Lanzhou, capital of northwest China's Gansu Province.

The networks are an indispensable part of the national scientific research and innovation system, stressed CAS President Lu Yongxiang at the conference. It is also an important scientific ground for continuously providing first-hand data and information for policy-makers on issues concerning environment and natural resources.

In the coming five years, priority in this regard will be placed on long-time studies, experiments and observations at fixed positions. Efforts will be made to strengthen their long-time surveying capacities, upgrading their abilities to carry out interdisciplinary research, and remarkably improve their innovation capabilities in the fields of ecology, modernized agriculture, resources and marine environment.

According to Prof. Fu Bojie, Director-general of the CAS Bureau of Science and Technology for

Resources and Environment, importance will be attached to the development of various nationwide networks and sub-networks specializing in urban ecology and regional ecosystems in east China, atmosphere and climate monitoring, chain observatories on the solar-terrestrial space environment, off-shore marine observation and research network, stations for Qinghai-Tibet Plateau monitoring, large-scale joint research on long-term ecological and environment experiments, automatic observation and real-time and long-distance communication system, and an integrated earth-observation system from space..

During the past half a century, CAS has set up more than 130 field stations, specializing in geology, biology, space science, rock mechanics, astronomy and acoustics, Among them, there are nearly 100 such stations focus on resource, environment, ecology and agriculture, covering representative regions across the land.

In 1988, CAS set up the Chinese Ecosystem Research Network (CERN), which consists of the field research stations for various ecosystems, including agriculture, forestry, grasslands and waterbodies. For years, through its long-term monitoring, research and experiment, demonstration and extension, it has served as an important facility to control desertification, soil erosion, salinization, and eutrophication.

The 1.2 million watt directly-propelled permanent-magnet wind-driven generator
(MOST, 2005-06-12)

As an project supported by State “863” Program, the prototype of the first world-class million-watt wind driven generator set in our country was in full preparation and entered the phase of trial-operation in April 24, 2005.

Developed by Xinjiang Goldwind Science & Technology Co., Ltd., this 1.2 million watt directly-propelled permanent-magnet wind-driven generator set was the first million-watt-level wind driven generator set in our country. With a rated power of 12,000 kw and impeller diameter of 62 m, its hub center is 69 m high, and the gross weight of its head is 80 tons. It adopts the overall design scheme of horizontal axis, three vanes, upper drift, gear change and feather adjustment, direct drive and incorporation of synchronous permanent magnet generators. With many patent technologies, it is one of the most advanced models of wind-driven generator sets. It features high safety, high efficiency, simplified and optimized structure and low maintenance costs etc.

The development of the generator set was carried out with full adoption of advanced technology and experience in the world. The development of million-watt wind-driven generator set and the production of its prototype promoted the design and study of wind power generation equipment in our country.

Sino-British scientists hold talks on hydrogen energy development
(CAS, 2005-06-28)

A China-UK symposium on hydrogen energy was held recently in Dalian, a coastal city in northeast China. Under the joint auspices of CAS, the National Natural Science Foundation of China (NSFC), the Royal Society in UK, the BP Group, the meeting was hosted by the CAS Dalian Institute of Chemical Physics.

As a component of the UK-China Partners in Science program, the six-day meeting provides a forum for scientists form the both sides to share development on hydrogen energy. Scholars had

discussions on various issues of hydrogen development ranging from strategy, national standards, demonstration site to fuel cell technology.

France wins race to host giant energy project
(China Daily, 2005-06-30)

France beat Japan in the race to host an experimental nuclear fusion reactor that scientists hope will produce a clean, safe and endless energy resource and help phase out polluting fossil fuels.

The backers the United States, the European Union, China, Russia, Japan and the Republic of Korea chose the French site in Cadarache, in the southern French region of Provence, during talks in Moscow. Japan reportedly backed down after agreeing to a bigger role in research and operations.

The US$13 billion project is likely to create about 10,000 jobs and take about eight years to build. But fulfilling the long-term vision of the International Thermonuclear Experimental Reactor, as it is called, could take decades.

The six-partner consortium is promoting the future of fusion, which reproduces the sun's power source and produces no greenhouse gas emissions and only low levels of radioactive waste.

If all goes well with the experimental reactor, officials hope to set up a demonstration power plant in Cadarache around 2040. Officials project that 10 per cent to 20 per cent of the world's energy could come from fusion by the century's end, said Raymond L. Orbach, director of the US Department of Energy's office of science.

Chinese Minister of Science and Technology Xu Guanhua also hailed the deal as a "milestone." He said the decision is an important result of talks marking a milestone in the process of thermonuclear research.

Xu added that the ITER project is of strategic significance for China, which is not rich in energy resources and needs sustained development. By involving in the project, China expects to raise its level of science and technology, enhance international cooperation and make contributions to mankind.

Also on Tuesday, the US Government applauded the selection of Cadarache, France as the site of the experimental nuclear fusion reactor.

"It boded well for ITER that there were two serviceable sites and six parties committed to this important fusion project," Raymond Orbach, who represented the United States at the meeting in Moscow said in a statement.

1.2 Earth and Environment

China to make first scientific study in East African Rift Valley
(Xinhua Net, 2005-06-02)

(The East Africa Rift Valley)

A group of Chinese scientists will set off on Aug. 2 for a 15-day scientific study tour of the East African Rift Valley, according to the China Association for Scientific Expedition (CASE).

The team will do research on the earth plate movements and geological environment changes and explore the origin of the hominid line, according to the Beijing-based newspaper Guangming Daily.

It will be the first Chinese scientific expedition to the valley, the paper said.

The first "Sino-African Scientists Forum" initiated by CASE will open in Addis Ababa University in Ethiopia at the same time.

Four taxonomic corpuses completed for Northeast China flora
(CAS, 2005-06-03)

Taxonomists at the CAS Shenyang Institute of Applied Ecology in northeast China published four taxonomic corpuses last year for classifying the regional flora of northeast China.

The Vol. IX of the Herbal Flora in Northeast China, chief-edited by Profs. Li Jiyun and Cao Wei and the corpus's Vol. X chief-edited by Prof. Qin Zhongshi were published by the Science Press in October 2004. The two voluminous works covers 614 species, 58 variants and 17 aberrations of herbal plants in 205 genera belonging to 12 families. Apart from the conventional narratives and

index forms, it contains the textual research of their formal names, vernacular names and scientific names both in Chinese and Latin, bibliography and literature for reference, living conditions, native habitats, distribution and usage. The majority of the catalogued plants is illustrated by pictures or graphs, providing valuable information for reference to research professionals or production organizers specializing in botany, agriculture, forestry, animal husbandry, gardening, medical sciences and related teachers and workers collegiate campus.

The Vol.XIII of the Flora is the last part of the compendium and by now its work of compilation and composition has been completed and will be off the press within the year. The complete conclusion of the whole work marks the final end of the Flora's compilation, resulting from the arduous work and perseverance of several generations of botanists and plant taxonomists. During the past decades, they had been throwing themselves in trekking, combing and trudging over a long way in collecting and sampling specimens in investigative surveys of the local plant resources in northeast China.

Another voluminous corpus is the "Flora in Greater Xing'anling Mountains: Its Zonation & Distribution," chief-edited by Prof. Cao Wei, and it has been published by the Northeast University Press in November 2004. It catalogues 1,183 species, three sub-species, 99 variants and 34 aberrations in 435 genera belonging to 105 families of vascular plants. This taxonomic work is so far the most complete and most detailed corpus in the floral zonation and distribution for the Mountains, providing scientific grounds for rational exploitation of the farming and forest resources in the mountainous area.

The last work compiled by the Institute's scientists is the Pictorial Album for China's Glossy Ganoderma Plants, chief-edited by Profs. Wu Xingliang and Dai Yucheng, which has been published by the Science Press in January 2005. It covers the detailed records on 103 species in four genera and three sub-genera of the known Ganoderma plants in China, including their ecological conditions, morphology, and distribution attached with some 300 colored plates in visualizing their natural habitats modes of life cycles, 103 graphics to show their sporogenetic courses and 48 pictures under the lens of an electronic microscope. The monograph is the summary of the authors' research on wild ganoderma plants lasting for more than 20 years. Its publication may play an instructive role in guiding a healthy development of the plant's research, production and sales as a medicinal plant with a so-called "miraculous efficacy."

Recycling helps city environments

(CCTV, 2005-06-03)

China has just released its Environment Report covering 2004. The nation's rapid economic development has inevitably brought a variety of environmental problems, but the government has been trying hard to overcome them.

The Chinese government has realized the importance of cities' environment, as more population floods in the urban area. The major measures for the protection, is to adjust cities economic construction, and to development circular economy.

A senior official from the State Environmental Protection Administration says the theme of the circular economy is the exchange of materials where on facility's waste, including energy, water, materials, as well as information , is another facility's input.

He says some cities have been chosen to have the economy on trial. Regulations are promulgates there for better implementation.

Wang Yuqing, deputy director of State Environmental Protection Admin.,said: "Besides legislative construction, the circular economy thoughts are also found in environment management, for instance, auditing of clean production, assessment of environmental influence. The third measure is to carry out wide campaign."

Many activities have been carried out to heighten public awareness of environmental issues. For instance, a nationwide contest to gauge environmental knowledge has been launched, an event to mark China's World Environment Day.

As well as city construction, officials say improving water quality remains a challenge. But they say that despite a growing urban population, which has made it harder to tackle the problem, great efforts from all sectors of society had meant that water quality has not deteriorated.

China seeks to better environmental protection

(CCTV, 2005-06-03)

More than 300 domestic and world experts have gathered in Beijing to discuss ways in which China can protect its environment while maintaining economic growth. The experts are in the capital for a three-day Development International Environment Forum.

Representing the Chinese government is vice-director of the State Environment Protection Administration, Zhu Guangyao. He said the rapid growth of China's economy over the past decades has been fueled by the growing consumption of energy and natural resources. But this consumption has led to unprecedented levels of environmental damage. As the country tries to bring prosperity to its 1.3 billion people, it must also keep the environment in mind. Experts called on every member of society to take care of the environment.

China to boost scientific observatory networks

(Xinhua Net, 2005-06-09)

The Chinese Academy of Sciences (CAS) will hasten to build scientific observatory networks throughout the country and collect data on the Earth and its ecological systems.

CAS President Lu Yongxiang said at an academic conference here Monday that scientific observatories are important research bases for stimulating research innovation.

Lu said the CAS regards the observatory networks as an inseparable part of its strategic innovation system, which hopes to bring about scientific breakthroughs.

In the next five years, the CAS aims to construct various long-term ecological research networks to create a seamless and integrated continuum making ecological informatics possible.

Fu Bojie, director of the CAS Bureau of Science and Technology for the Environment and Resources, said the proposed networks include ecological and environmental monitoring networks in eastern cities, climatic environment observation networks, Sun-to-Earth space environment observation networks, offshore marine observation networks, the Qinghai-Tibet Plateau observatories, automatic observation and live data-transmission systems, and space observation networks for Earth.

Scientific observatories are vitally important for the scientific community to carry out research on ecological restoration, environmental protection, agricultural development, disaster reduction and sustained exploitation of natural resources,Fu said.

Since its founding more than five decades ago, the CAS has established over 130 scientific observatories nationwide, which work for geoscience, biology, space environmental science, rock

mechanics, astronomy and acoustics.

In 1988, the CAS started to build the Chinese Ecosystem Research Network, a nationwide ecological observatories system with uniform operations and standardized equipment.

High-efficiency water-saving devices for dry farming areas
(MOST, 2005-06-11)

"Demonstration of High-efficiency Water-saving & Supplemental Irrigation Devices and Technologies", a project of the State Fund for Agricultural S&T Results Transformation, centered around the development of water-saving agriculture and higher yield for farmers, has successfully transformed an independently developed multi-functional onboard water-saving and supplemental irrigation equipment and technology, based on a farm vehicle widely seen in rural China.

Ever since the beginning of the Project, the Project Team has been working hard at the establishment of an integrated system of research, production and sales and the transformation of model technological achievements. A pilot test premise for water-saving and supplemental irrigation devices was constructed and different types of new devices were developed. These achievements were then submitted to the agricultural machinery authorities and health authorities for appraisal and accreditation and an enterprise standard was registered. After they were tested and accepted by the Testing Center of Irrigation and Drainage Equipments of Ministry of Water Resources, 12 demonstrative areas were established in Ningxia and 10 other adjacent provinces and regions for the large-area demonstration of supplemental irrigation of watermelon, muskmelon, Chinese medicinal plants and other crops. In addition, the demonstration and promotion of the water-saving and supplemental irrigation devices developed under the Project cracked the drinking water hard nut for 5,000 people and 10,000 livestock in the dry farming areas. Thanks to the implementation of the Project, the ecological environment is optimized and the subsistence and living conditions of the farmers and herdsmen in the Project area are improved.

Shapotou field station scores significant progress in five decades
(CAS, 2005-06-14)

When it was inaugurated 50 years ago, the Shapotou Desert Experimental Research Station had only a handful of scientific workers with the objective of helping protect the pavement of a major east-west railroad. Over the past five decades the researchers have made remarkable research achievements by continuously exploring new scientific frontiers in light of sand ecology and environment studies in the world, says CAS President Lu Yongxiang during his recent inspection tour to the station in Ningxia Hui Nationality Autonomous Region.

The 50-year development of the Shapotou Desert Experimental Research Station, an affiliation of the CAS Cold & Arid Regions Environmental & Engineering Research Institute, gives us eye-opening inspirations, says Prof. Lu.

The researchers have succeeded in developing a unique approach of straw checkerboard barriers, ensuring the safe operation of the national infrastructure. Their success adds an imperishable page to the Chinese annals against deserts, becoming an imitable model for implementation of the national strategy to promote western China's development, comments the CAS president.

In the field of disciplinary exploration, he added, the station made probes and tests in protection of the native bio-diversity and ecological restoration in an arid area. Its operation not only provides precious data for harnessing deserts, but also supports the development of local economies and the upbringing of innovation-minded talents. The successful and rewarding modes developed by the station in water-saving agriculture, cycling and benefit farming practice could be popularized both in local region and other arid areas in hinterland China.

Prof. Lu expressed his hopes that the station staff would do their best in the ecological revival, environment-friendly agriculture to rejuvenate rural economies and make farmers well-off, building it into a top-ranking ecological base in China and an excellent hub for desert research in the international community.

CAS joins science academies across the world in urging world leaders to fight global warming

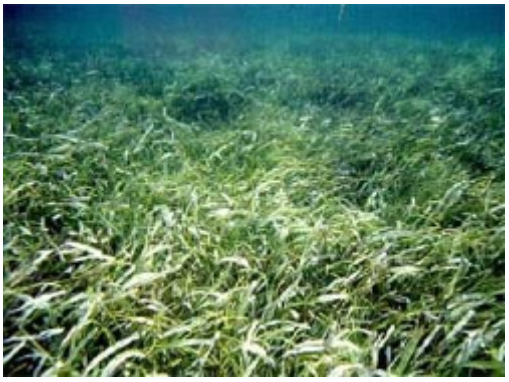
(CAS, 2005-06-16)

Together with his counterparts in 10 other national academies of sciences, CAS President Lu Yongxiang recently signed a statement, stressing that the scientific understanding of climate change is now sufficiently clear and urging world leaders, including those meeting at the G8 summit next month, to do the following:

- Acknowledge that the threat of climate change is clear and increasing.
- Launch an international study to explore scientifically-informed targets for atmospheric greenhouse gas concentrations, and their associated emissions scenarios, that will enable nations to avoid impacts deemed unacceptable.
- Identify cost-effective steps that can be taken now to contribute to substantial and long-term reduction in net global greenhouse gas emissions. Recognize that delayed action will increase the risk of adverse environmental effects and will likely incur a greater cost.
- Work with developing nations to build a scientific and technological capacity best suited to their circumstances, enabling them to develop innovative solutions to mitigate and adapt to the adverse effects of climate change, while explicitly recognizing their legitimate development rights.
- Show leadership in developing and deploying clean energy technologies and approaches to energy efficiency, and share this knowledge with all other nations.
- Mobilize the science and technology community to enhance research and development efforts, which can better inform climate change decisions.

The statement is signed by Academia Brasiliera de Ciëncias, Brazil; Royal Society of Canada, Canada; Chinese Academy of Sciences, China; Acadëmie des Sciences, France; Deutsche Akademie der Naturforscher, Germany; Indian National Science Academy, India; Accademia Nazionale dei Lincei, Italy; Science Council of Japan, Japan; Russian Academy of Sciences, Russia; Royal Society, UK; and the National Academy of Sciences, US.

First demonstration site for seagrass protection and management launched in China
(CAS, 2005-06-17)



Recently the CAS South China Sea Institute of Oceanology and the Coordinating Unit for the UNEP/GEF Project on Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand signed an agreement on Hepu Seagrass Demonstration Site in Southwest China's Guangxi Zhuang Autonomous Region. The move marks the inauguration of the first such site in China.

Started from January 2002, a research team from the CAS institute has made efforts to map and study seagrass meadows in the coastal areas in Guangdong, Hainan provinces and Guangxi Zhuang Autonomous Region. The investigation has led to the discovery of seagrass beds with a total area of more than 2,000 hectares in the coastal area of south China. Via the survey, the scientists have initially made clear the geographic distribution of seagrass, its taxonomic composition, coverage, productivity, and the bio-diversity and ecological features of the seagrass ecosystem.

The goal of the three-year project in Hepu is to establish a demonstration site of community based management, with the aim of maintaining the existing biodiversity and environmental condition and utilize the seagrass resources in a rational and sustainable way. This is to be accomplished through maintaining the balance between utilization and conservation, with the aid of community and government involvement. Experiences in the research, protection and utilization of seagrass beds in the site are expected to be useful for other seagrass beds in China and even hopefully other parts of the world.

As one of the three typical ecosystems in shallow seas (the other two are mangrove and coral reef), the seagrass forms the groundwork for many complex marine ecosystems and provide a valuable nursery for commercially important fish and crustaceans. When the seagrass decline, the links in the productivity chain are broken and the whole ecosystem collapses. Most importantly, it has ecological value in purification of water quality, absorption of the excessive nutrients which tend to trigger the outbreak of "red tides", that is algal blooms, silt fixation and act as a spawning field for various marine organisms. In addition, the seagrass beds are ideal habitats and shelters for sea turtles, Dugong and other rare kinds of marine wildlife.

Meteorologists mobilized to cope with severe flood, droughts
(Xinhua Net, 2005-06-18)

The provincial meteorologist heads across China convened Friday to discuss measures to cope with increasing flood and droughts across the country.

Qin Dahe, head of China Meteorological Administration, said that the two rain belts will slash both the rainy south and the relatively arid north. The flood season will likely result in both severe droughts and flooding, both which will result in a bad harvest.

Meteorologists observatories across the country should work to provide timely and accurate weather information for the public, especially near reservoirs, big rivers and lakes, Qin said.

China has received more than average rainfall beginning in May. The southern China began its flood season earlier than the previous years. Some parts of the country, including middle Hunan, middle Jiangxi and northern Geizhou, received about 90 to 150 percent more rain than in the previous years, Qin said.

About 300 counties across 20 provinces have been hit by rainstorms, hail and lightning since May. Meanwhile, frost and snowstorms plagued northwestern China.

Though most parts in the southern China are soaked in rain, Yunnan and Hainan provinces have been experienced droughts.

China's flood season usually lasts from June to August. The latest severe climate-related disaster claimed 106 lives and left three missing in Shalan Township in Ning'an, a city in northeastern China's Heilongjiang Province, according to Friday's statistics.

China´s efforts to prevent desertification & drought
(CCTV, 2005-06-18)

Friday was the day when the world turns its focus towards deserts, and trying to combat drought and desertification. And China is particularly looking at how this can help build a harmonious society.

Currently, a third of China's land territory - home to 400 million people - is under threat from the spread of deserts, and the situation is getting worse year by year. The Chinese government have pumped over 15 billion yuan, some 1.9 billion US dollars, into fighting desertification since 1995.

According to the latest State Administration of Forestry statistics, the spread of China's deserts have been reduced by nearly 40,000 square kilometers over the last decade.

Deputy Director of State Administration of Forestry Zhu Lieke said, "Our prevention and control efforts used to lag behind the pace of desert expansion. But as of now, we are able to keep the desert areas from spreading further. Ecological and environmental conditions are also being improved in these areas. In the late 1990's, China's desert area increased by over 3,400 square kilometers every year. But now, desert areas are decreasing by more than 1,200 square kilometers every year."

Chinese forestry authorities also said that over the next few decades, more than one-third of China's 1.7 million square kilometers of desert could be turned into arable land.

Desertification refers to the degradation of land in arid, semi-arid and dry sub-humid areas. It comes mainly from variations in climate and from human activities, like overcultivation, overgrazing and deforestation. Now, a third of the Earth's land surface is threatened by desertification, directly affecting around a billion people.

WWF funds ecological protection in Heilongjiang River valley
(Xinhua Net, 2005-06-20)

The World Wildlife Fund (WWF) will invest 1.2 billion euros in the coming years to help improve the environment in the valley of the Heilongjiang River which runs the border between China and Russia.

The money will be mainly used in the construction of nature reserves in the border areas , building of a cross-border passage for Siberian tigers, protection of valuable forests, environmental protection in the Xingkai Lake area and development of tourism in northeast China's Heilongjiang Province.

This is part of a program launched by the WWF to build a "green corridor," for the purpose of maintaining balanced development between mankind and nature, in the valley of Heilongjiang River which runs through Russia, Mongolia and China.

Preparations for ecological protection in the river valley areas in Mongolia are going smoothly, according to sources with the WWF.

Zhu Chunquan, forest program director of WWF China, said the WWF has during the past three years invested about US$1.5 million in Heilongjiang Province and another US$4 million in Russia to support China and Russian to build nature reserves and develop projects for sustainable use of natural resources.

Research has found that the Heilongjiang River, with abundant natural resources, is one of the few rivers in the world which have been well preserved. The river valley has the richest wetland resources and forest biodiversity in the world.

Zhu said the protection of biodiversity should not be separated by boundaries within the 1.84 million square kilometers region irrigated by the Heilongjiang River, among which about 940,000 square kilometers are in China.

Many species such as the Siberian tiger and black bear need a large habitat. Hundreds of bird species such as the red-crowned crane and white crane also take it as a migrant passage or habitats, Zhu said. Governments, companies and institutes in the region should work with international organizations to carry out biodiversity conservation.

Homemade equipment cuts coring from seabed

(People's Daily, 2005-06-21)

Chinese scientists who are carrying out a global ocean expedition on the Pacific have successfully taken about a hundred samples with independently developed deep-sea coring bit. The homemade

equipment has withstood the test of the sea and made great contribution to ocean drilling.

The deep-sea coring bit is 1.8 meters long, 1.8 meters wide and 2.8 meters high weighing 2.8 tons. As an underwater cable drilling equipment it can be lowered into a depth of 4,000 meters under the water with a drilling depth of 700 millimeters and a core diameter of 60 millimeters. It is the world's first large seabed shallow core drilling equipment capable of carrying out multiple-coring task at one underwater mission.

During the global expedition the equipment is used for the prospecting of more than 150 sites for deep-sea cobalt-rich ferromanganese mines.

Homemade equipment cuts coring from seabedHomemade equipment cuts coring from seabedHomemade equipment cuts coring from seabed.

Prof. Cai Shuming receives 2005 Wetland Conservation Award
(CAS, 2005-06-21)

Prof. Cai Shuming, an expert in wetland studies from the CAS Institute of Geodesy & Geophysics, has been honored with a Ramsar Wetland Conservation Award in 2005. The announcement was made by the Standing Committee of the Ramsar Convention on June 10 in Gland, Switzerland.

The Ramsar Award was established in 1996 in order to recognize and honor the contributions of individuals, organizations and governments around the world towards promoting the conservation and sustainable use of wetlands. The 2005 Award is made in the three categories of management, science, and education.

According to the Standing Committee, Prof. Cai is chosen as the laureate in science category for his research studies on the Yangtze River. He was also recognized by the international community for his in-depth research on the effects of the Three-Gorge dam project on the environment, assessment and mitigation of natural disasters (*e.g.* flood and water logging in the middle reaches of the Yangtze River). A respected figure and a member of the Chinese People's Political Consultative Conference, Prof. Cai has used his scientific achievements to reach practical results for wetland conservation. He is also an active advocate for the legislation on the protection and control of wetland in China.

The Convention on Wetlands is an intergovernmental treaty adopted on February 2 1971 in the Iranian city of Ramsar. Entered into force in 1975, it is the first of the modern global intergovernmental treaties on conservation and wise use of natural resources. As of May 1, 2003, it has 136 contracting parties. China became a signatory party to the international convention on wetland in 1992.

Calculation on height measurement of Mt. Qomolangma in full swing
(People's Daily, 2005-06-22)

As is learned from State Bureau of Surveying and Mapping, the work of field measurement of 2005 Mt. Qomolangma height measurement, which enjoys great public attention, has come to completion recently. Now calculation on the data collected is in full swing in Xi'an and Beijing.

The calculation process on data goes on smoothly so far. It is estimated that preliminary results of the height of Mt. Qomolangma will come out within the month. The final result will be subject to State Council's approval, and announced worldwide around August this year.

Green projects help rein in sandstorms
(CCTV, 2005-06-22)

(Peking University in Sandstorm)

China's battle against desertification has received strong government support with both tree-planting efforts and ecological preservation measures. Here in Beijing, the local government has achieved success by building a green belt around the city as well as protecting its valuable natural resources.

To rein in sandstorm, China began the "Great Green Wall" project in 1978. China hopes to build a green belt across the northeast which will stretch nearly six thousand kilometers. Much longer than the "great wall", this one is facing a different enemy.

Over 400 million people in China are plagued by the soil erosion problem. Nearly one third of the land is desert, and it's still expanding. Experts say desertification is caused by firewood collection, excessive grazing and over-cultivation. It buries farmlands, destroys biodiversity and causes serious water shortages.

To tackle this problem, the government has championed a large -scale effort to plant trees. Wang Guiying, Deputy Director of Beijing Municipal Development and Reform Committee, said, "We began building the green belt around Beijing in 2000, when the sand storms were terrible. Not only did the trees protect the people from sand, it also saved the local ecology from destruction." But tree planting is not the only solution to desertification. Authorities are also concerned about protecting wildlife, and plant resources.

Wang also said, "Since last year, we have worked to relocate around 2,000 residents from rural areas with severe soil erosion and also valuable water resources. This is to preserve the ecological system and also protect residents from environmental dangers." In Beijing, over two thirds of the land is green. That's a ten percent increase since 2000. This has resulted in both improved air

quality and fewer sand storms.

The battle against desertification is an ongoing one. But China is hoping that measures like the "green wall" project will bring soil erosion under control by the mid 21st century. And that fits in with the country's larger strategy of achieving sustainable development in its economy.

Major progress in a 863 project of seawater-resistant vegetable planting
(MOST, 2005-06-28)

Major progress has been achieved in the research on "Seed Selection and Application of New Breeds of Seawater-resistant Vegetables", a project of marine biotechnology in the sector of resources and environment in the 863 Program of MOST. Presently, the largest seawater-resistant vegetable pilot test base and project implementing park have been built in Dafeng, Jiangsu Province. This is one of the ten key S&T projects in Dafeng City.

Through screening of resources, breeding of new kinds of salt-proof and seawater-resistant vegetables by cellular and gene engineering, and integrating with modern agricultural cultivation techniques and balanced nutrient solution recipe technologies, the project finally realized the seawater vegetable planting on low beach saline-alkali land. Currently the planting area of the pilot base has exceeded three thousand mu (1mu=1/15 hectare).

The product of "sea asparagus" in this project has already obtained Class A certificate for green food and the certificate for organic food. Since the implementation of this project, 200 vegetable greenhouses, a project implementing park exceeding the scale of 3,000 mu and the industrialized production base have been built, amounting to an accumulative total of over ten thousand mu planting area. The sales network for the products have been set up in Shanghai, Nanjing and Hangzhou.

Since its implementation, this project has already applied for 12 patents/new variety copyrights, of which 9 for state patents of invention, 1 for Patent Cooperation Treaty (PCT) and 2 for new variety copyrights. Over 20 papers have been published, 12 doctor postgraduates and 12 master postgraduates have been cultivated.

1.3 Health

Anti-AIDS drug "breakthrough" claim
(China Daily, 2005-06-01)

Early clinical trials conducted at two Beijing hospitals allegedly show a new medication developed by a Chinese medical company may effectively increase immune cells in AIDS patients and relieve symptoms of the deadly disease.

Zhang Xiuhua, vice-manager of Xiehe Group in Shenyang, capital of Northeast China's Liaoning Province, said her oral liquid uses an active protein to produce more CD4 positive lymph cells, an immune cell destroyed by HIV virus, and to protect bodies from various infections.

"It employs the technique of super-antigen, a powerful antigen capable of activating immune cells significantly," claimed Zhang. "The medicine can increase the CD4 positive lymph cells and assist to reach a normal proportion between CD4 and another immune cell, called CD8 positive, resulting in proper immune functions in human bodies," she added.

Zhang also claimed after at least one month, when AIDS patients should take at least two dosages a day, AIDS symptoms are obviously relieved and lives prolonged.

On the company's website, an undated report of a clinical trial involving 20 AIDS patients admitted allegedly in Beijing You'an Hospital claimed the medication can effectively relieve such AIDS symptoms as hair and weight loss, diarrhea, poor appetite and weakness.

More importantly, after three months of treatment, the number of CD4 positive cells could reportedly be elevated by upwards 50 per cent, the report claims.

But Wu Hao, department director for infectious disease at You'an Hospital, said he is not familiar with the oral liquid's name, its clinical trial in his department or even the Xiehe Group.

Despite its alleged effectiveness in increasing immune cells, Zhang claimed the medication is unable to kill HIV virus, and is still not available on Chinese markets.

Nation reveals anti-AIDS crusade

(China Daily, 2005-06-02)

AIDS and HIV are to be fought on three fronts-prevention, intervention and treatment, announced the central government yesterday.

The strategy is part of a five year plan to combat the deadly disease which affects nearly a million Chinese at least.

Wang Longde, vice-minister of the Ministry of Health and the director of the Office of the Working Committee for HIV/AIDS Prevention and Control under the State Council, said the government had devised a wide range of measures for its second five-year plan to bring infection under control.

Prevention first

"First and foremost will be the emphasis on raising public awareness of HIV/AIDS prevention, which is vital to prevent the disease from spreading wider," he told China Daily.

China's first five-year plan on HIV/AIDS prevention and control (2001-05) ends this year. The second-from next year to 2010-will be critical in combating the deadly disease, said Wang.

AIDS/HIV first surfaced in the country in 1985, and is now mainly spreading among high-risk groups including blood sellers, drug abusers, prostitutes and homosexuals.

The second part of the strategy "is to identify as many HIV carriers as soon as possible," said Wang.

According to a report jointly prepared by the United Nations and the Ministry of Health in 2003, China has an estimated 840,000 HIV/AIDS recorded cases.

But only 7.4 per cent of those infected have been reported. The figure last year was 12.4 per cent while the rate of reported cases around the world is 11 per cent of estimated sufferers.

"Without knowing who the carriers are, how can governments provide the sufferers with a comprehensive care project?" asked Wang, who said the government wanted a holistic approach to combat the disease.

China made extensive efforts last year to identify victims, especially in high-risk groups, said Wang.

Thousands have been tested for HIV in Henan and other major provinces and regions where illegal and unsafe blood donations for cash and other forms of transmission were rampant in the 1990s, the minister said.

A survey in Henan last year showed that 25,000 of 280,000 blood donors in the last decade tested

positive for HIV, according to provincial health authority of Henan. The nationwide figure will be released on December 1, World AIDS Day, Wang said.

Three high-risk groups which are targeted for prevention and intervention are prostitutes, homosexuals and prisoners, among whom the infection rate is believed to be worryingly high.

"The nation had 190 State-level surveillance and monitoring sites last year and 57 will be added this year," Wang said. At provincial level, there are about 400 testing centres.

Four free charges

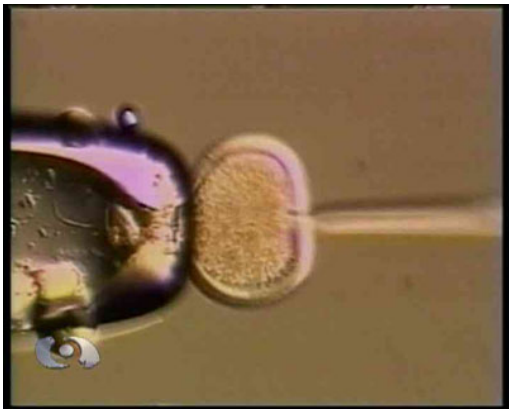
The third part of the strategy is to strengthen the "four free charges and one care" project, said Wang.

The care scheme offers free medicine for HIV carriers, free and anonymous HIV tests, free education for orphans of HIV/AIDS victims and free prenatal treatment of infected pregnant women.

Elderly people who have lost children to AIDS receive free care.

The central and provincial governments will continue to increase spending on HIV/AIDS control and prevention. "We will not only treat the disease, but also help victims make a living," Wang said.

China leads the world in organ cloning research
(People's Daily, 2005-06-08)



Some of the experts attending the Seminar on Sino-French Cell and Tissue Engineering Therapeutics and Forensic Medicine 2005 believe that China is in the world' leading position in the area of cultured tissues.

Cell engineering is a burgeoning cross-sectional discipline, which applies basic principles and technologies of life science and engineering to build human tissues and organs with artificial methods. The resulting tissues and organs, commonly referred to as "human body spare parts plant" or "cloned organs", are used to replace or treat damaged ones.

Ouyang Jingping, professor at the Medical School of Wuhan University, said the studies have begun only recently but are advancing rapidly. China has achieved rapid progress in the area and is in a leading position in many aspects. In 1992 China was the first to grow a "human ear" on the body of a nude mouse and leads the world in treating ocular surface diseases with cornea stem cells. China succeeded in carrying out the first study on human-rabbit embryo fusion. Chinese and French scientists collaborated to apply mechanical force to ligament to make the ligament more resistant to strains. The research is a perfect integration of biomechanics and medical science.

Sino-US programme targets HIV/AIDS

(China Daily, 2005-06-08)

The United States will contribute US$35 million over the next three years in a joint effort with China to combat HIV/AIDS.

US Global AIDS Coordinator Randall Tobias, who made the announcement at a press conference in Beijing yesterday, said a close partnership between China and the United States was vital for tackling the disease.

"I am very, very impressed by the commitment made by the senior leadership of China," Tobias said. "My visit here on behalf of the president of United States, President Bush, is to better understand issues in China regarding HIV/AIDS."

According to the Ministry of Health, co-operation between China and the US on HIV/AIDS prevention and control began in 2002. Apart from the two governments, the partnership now involves institutions, non-government organizations and even businesses, the ministry said.

Northeast China's Heilongjiang Province is one of the beneficiaries of the collaboration.

Since last June, the US Global AIDS Programme has helped set up 15 of the province's 21 HIV surveillance sites at disease control and prevention centres.

Between June and November last year, 60 people tested positive for HIV, accounting for one-third of such cases detected in the province since the early 1990s.

"The programme has really helped us," said Wu Yuhua, a top researcher with the provincial disease control and prevention department.

"Assistance ranges from money grants to professional personnel, and, most importantly, it is based on our actual needs."

Wu said that after a year of effort, local authorities have realized the urgent need to bring the pandemic under control. In the coming year, the programme will help provide HIV/AIDS training for local disease control departments.

But the anti-HIV/AIDS campaign still has a long way to go.

According to the Heilongjiang disease control and prevention department, HIV/AIDS is now spreading from high-risk groups, such as blood sellers, prostitutes and homosexuals, to those in lower-risk groups - mainly through sexual transmission.

"The campaign against this monstrous disease started late in our province," said Wu. "We are still short of funds, facilities and professionals with proper knowledge about HIV/AIDS, despite assistance from the central government and foreign organizations in recent years."

The Chinese Government recently pledged 3.9 billion yuan (US$474 million) to help local governments fight AIDS and HIV.

But as well as material support, a major change is needed in local authorities' thinking, said Wu.

China's immunization scheme makes progress amid problems

(Xinhua Net, 2005-06-09)

China has made "noticeable" progress in its immunization program, while problems still exist due to such reasons as imbalanced regional development of the program and shortage of funds, Chinese Vice Minister of Health Mao Xiaowei said at an international medical conference held in Beijing Wednesday.

Mao said that the incidence rates of chincough, diphtheria and tetanus and other epidemic diseases included in the country's immunization scheme have dropped to a historic low.

On the other hand, the program has witnessed "retrogression" in some economically backward and remote areas, Mao said at the 15th Meeting of the Technical Advisory Group on the Expanded Program on Immunization (EPI) and Poliomyelitis Eradication in the Western Pacific Region, which is jointly sponsored by the World Health Organization and China's Ministry of Health.

China's national immunization scheme has successfully protected "hundreds of millions of people" from being infected by once common and deadly diseases, according to the "2004 International Review of the Expanded Program on Immunizations in China" prepared by the secretariat of the meeting.

Nevertheless, statistics show that 10 poor provinces and autonomous regions failed to reach the national coverage target of either equaling or exceeding 85 percent in terms of the number of people having been inoculated against, Bacillus-Calmette-Geurrin, oral polio, combined diptheria-pertussis-tetanus and measles.

The report suggests that special attention should be given to inoculation work in remote and backward areas and areas inhabited by ethnic minorities, so as to make the scheme benefit more people.

Chinese lab excel in DNA identification of tsunami victims
(Xinhua Net, 2005-06-10)

A Chinese genome research lab in Beijing will soon receive a fourth batch of samples from tsunami victims from Thailand for DNA identification.

"We have done very well with the previous three batches. I believe that's why they've ask us to take more," said Deng Yajun, director of judicial evidence ascertainment center of the Beijing Genomics Institute.

Deng said the institute has completed identification of 1,060 DNA samples of tsunami victims entrusted by Thailand. It succeeded in extracting DNA profiles from 84.7 percent of the bone samples and more than 80 percent of the tooth samples.

"Of the seven labs in the world that undertake identification of DNA samples of tsunami victims, my team received the biggest number of samples, submitted the biggest amount of information and achieved the highest success ratio," she said.

According to Deng, her peers used the labor-intensive Mitochondria method as well as conventional methods in the identification process. The Mitochondria method has proved very effective in the samples from tsunami victims, which had low DNA content because of exposure to sea water and high temperature, compared with other methods.

"Some labs are inclined to use the Mitochondria method," said Deng.

The Beijing lab, a unit under the Chinese Academy of Sciences, carried out the work for free.

Public release of pig genomic sequences
(CAS, 2005-06-10)

The CAS Beijing Genomics Institute (BGI) and the Danish Committee of Pig Breeding and Production (DCPBP) jointly announce the public release of pig genomic sequences. The released sequence data include 3.84 million pieces of the genomes of five different domestic pig breeds from Europe and China. The data are generated from the first large scale pig genome sequencing effort, the Sino-Danish Pig Genome Project, started in 2001 on the basis of a long standing collaboration of scientists and research institutions from China and Denmark.

An open access research article from the Sino-Danish Pig Genome Project can be found at: http://www.biomedcentral.com/1471-2164/6/70 and the genome sequence data are immediately accessible from the NCBI Trace Repository (Center name: "SDJVP"; Project name: "Sino-Danish Pig Genome Project") and GenBank, a public DNA sequence database of the US National Institutes of Health.

In addition to the genome survey, 100 libraries of expressed sequences from different pig tissues and developmental stages have been analyzed. These sequences will be released in the near future together with a publication on pig gene expression.

This far, the pig sequence data have been obtained thanks to an investment of app. 10 million US$ by CAS and DCPBP together with the Ministry of Science and Technology and the Natural Science Foundation of China.

The research indicates that pig is genetically closer to man than normally used laboratory animals. This has important implications for the use of pigs in medical research and drug testing. Thus, the availability of the pig sequence data will allow other public and private researchers to identify many important aspects relating to biomedical research as well as to production, food safety and animal health traits that will greatly benefit health care, industry and consumers.

The Sino-Danish Pig Genome Project has been one of the best examples of international scientific collaboration, which puts its emphasis on issues of wider importance. The endeavour will be incorporated into the next stage of the pig genome project in which a draft sequence map of 6 fold genome coverage will be produced. This effort will be coordinated by the international Swine Genome Sequencing Consortium (SGSC) led by scientists from USA and UK. A simultaneous announcement will also be made by SGSC and the Alliance for Animal Genome Research (AAGR) in support of this public release.

DCTBP represents the world leading Danish pig breeders and global exporters of pig products. Denmark, with a population of only 5.4 million people, produces app. 25 million pigs per year.

BGI is a leading genomics research institution in the promotion of genomics in agricultural research. In the past 5 years, in addition to its contribution to the international Human Genome and HapMap Projects, BGI has sequenced the genomes of rice, chicken, silkworm, and many microorganisms of importance for agriculture, environment, and infectious diseases. BGI will

continue its efforts in pig genome research through its support to and participation in SGSC.

'Clone' ancient ceramics with their 'fingerprints'

(China News, 2005-06-10)

Shanghai Institute of Ceramics of the Chinese Academy of Sciences revealed on June 8 that after years of research, its lab on ancient ceramics has set up a "fingerprint" database of ancient ceramics. After successful restoration of ceramic production techniques in ancient times, the lab has successfully cloned various ancient ceramics made by imperial kilns of the Southern Song Dynasty (AD1127-1279).

In fact, "fingerprint" of a ceramic refers to its chemical components. Since ceramics made in different times and places show different features of element distribution, once the "fingerprint" of a certain ceramic is known, the ceramic can be cloned.

According to Wu Rui, a researcher of the lab, at present the database includes "fingerprints" of five categories of ceramics, namely elegant and exquisite ceramics from imperial kilns of the Southern Song Dynasty in Zhejiang, extremely rare and precious ceramics from Ru Kiln of the Northern Song Dynasty (AD960-1127) in Henan which only had a history of a few decades, blue and white porcelain from imperial kilns of the Ming (AD1368-1644) and Qing dynasties (AD1616-1911) in Jiangxi's Jingdezhen, world-famous ceramics from Zhejiang's Longquan Kiln and ceramics from Zhejiang's Yue Kiln, origin of china.

The "fingerprint" database of the lab includes macro-elements and trace elements contained in the five categories of ancient ceramics but currently the lab can only clone ceramics from imperial kilns of the Southern Song Dynasty.

Successful development of TCM new drug for cancer treatment

(MOST, 2005-06-10)

Major breakthrough has been made in the research project of “Recombinant Humanized Anti-epithelial Growth Factor Receptor Monoclonal Antibody ” (name of drug: Taixinsheng), key project of “Innovative Drug and Modernization of Traditional Chinese Medicine” conducted by MOST in the National Tenth Five-year Plan. It obtained the new drug certificate from State Food and Drug Administration on April 11, 2005. This is the first human mono-clone antibody drug approved by our country for treating cancer and also a major breakthrough in the field of target treatment and human antibody drug in our country.

As a target anticancer drug developed and manufactured by comprehensive utilization of such modern biotechnologies as gene engineering, antibody engineering and cell engineering, Taixinsheng can block the tumor cell cycle progress, speed up death of tumor cell, suppress the

generation of tumor blood vessels and tumor infiltration and transfer and enhance the effect of radiotherapy and chemotherapy. It is also featured with strong treatment idiosyncrasy, high biologic utilization and low side reaction. It can notably increase the cancer cure rate and the patient survival rate. Result of clinical experiment on terminal nasopharyngeal carcinoma patient showed that Taixinsheng in combination with radiotherapy can increase the complete remission rate of nasopharyngeal carcinoma patients by over 30 % in comparison with single radiotherapy. As satisfactory in terms of safety, it has produced no serious harmful reaction in clinical experiment. Currently its clinical trial is undergoing in Canada, Germany, Italy and India for treating several kinds of cancer. The effects are satisfactory. Except for the approved treatment of nasopharyngeal carcinoma, it is expected that Taixinsheng will be used in many types of tumors with over-expression of EGFR such as breast, bladder, colon, pancreatic, prostate, head and neck, glioma, ovarian and cervical cancers and non-small cell lung cancer. Since these are cancers with high incidence in China, the clinical application of this drug is very promising in our country with great market potentials.

BioTech Pharmaceutical Co., Ltd. developer and producer of Taixinsheng, is a high-tech joint venture of China and Cuba. Taixinsheng is the first drug of its kind in China that possesses independent intellectual property right, therefore it has a far-reaching effect on the development of biomedicine technology. Once the production scale is expanded and more indications are found, Taixinsheng is expected to become a biological product with the yearly sales exceeding 1 billion yuan. So its economic and social benefits are great.

S&T base for TCM modernization passed acceptance check
(MOST, 2005-06-12)

Recently, MOST organized nine experts to conduct acceptance check over “S&T Base for the Modernization of Traditional Chinese Medicine”. In light of the target and task raised in the Feasibility Report of the Base and according to the assessment of the experts, Guizhou province became the first S&T base for the modernization of traditional Chinese medicine that fulfilled construction task according to the base construction program approved by MOST and passed acceptance check.

Guizhou province is the S&T base for the modernization of traditional Chinese medicine approved by MOST in 2002. Through nearly five-year development, the construction of Guizhou base has made remarkable improvement: having built and improved 16 project centers and major labs and having developed 15 new kinds of national-standard traditional Chinese medicine; having realized a gross output value of traditional Chinese medicine of over 5.3 billion RMB; having built over 30 standardized plantation bases of traditional Chinese medicinal materials with a plantation area of over 100,000 mu; having benefited over 200,000 farming households with annual income increase of about 80 million RMB. The expert team believed that setting up Guizhou base had been combined with its own industrial advantages and features. With the remarkable improvement of scientific and technological strength, this industry has witnessed rapid development. A good development model of multi-department cooperation, multi-channel investment, combination of production and research, and integration of resources in and outside the province, both home and abroad has been formed, which plays an important role in the sustainable development of Guizhou society and economy, and has gained notable outcomes.

China determined to curb HIV/AIDS

(China Daily, 2005-06-14)

Premier Wen Jiabao told UN officials Monday that China is determined and capable of controlling HIV/AIDS in the country.

"China is still facing serious challenges in HIV/AIDS prevention and control, but the Chinese government is determined and capable of curbing the spread of the disease to ensure the people live a healthy and peaceful life," Wen said in a meeting with Peter Piot, executive director of the Joint United Nations Program on HIV/AIDS (UNAIDS).

China has an estimated 840,000 people infected with HIV, including 80,000 with full blown AIDS.

Wen said the Chinese government attaches great importance to the work of HIV/AIDS prevention and control and has set up a working mechanism led by the government, coordinated by different departments, and participated by all social sectors.

China's cabinet set up a high-level committee in 2004. The organization, known as the AIDS Prevention Committee, is headed by Vice-Premier Wu Yi, and involves 23 departments and institutions of the central government and leading officials of concerned departments of seven provincial governments.

Wen said China has formulated its national guideline on HIV/AIDS prevention and enacted a series of policies. "We also greatly increased financial input and manpower into the fight against HIV/AIDS."

In September 2003, the Chinese government announced that it would provide free anti-retroviral treatment to AIDS patients in rural areas and those urbanite sufferers with financial difficulties. The government also promised free HIV screening, free therapy to intercepting mother-to-infant transmission, free infant HIV testing and financial assistance for orphans whose parents have died of AIDS.

Wen said China also increased the intervention work among the groups with high-risk behaviors and enhanced public education to improve people's awareness of self-protection and reduce social discrimination.

"Those efforts have led to significant results," he said, adding that the Chinese government will continue to intensify the efforts and make sure that all the policies and measures will be fully implemented.

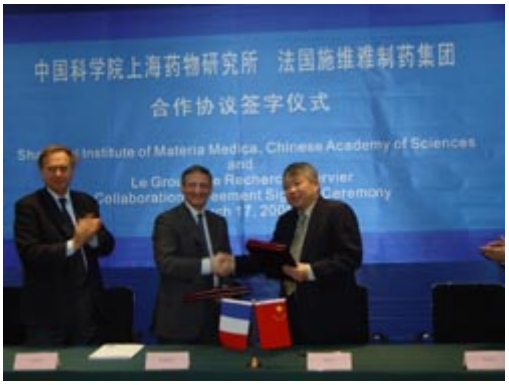
Wen also expressed appreciation for international help, saying that the Chinese government wants to improve exchanges and cooperation with the international community to make its due contribution to the global fight against HIV/AIDS.

Piot said he was deeply impressed with Chinese government's determination and policies in curbing the spread of HIV/AIDS.

He said China is playing a positive role in the global fight against HIV/AIDS and the UNAIDS will continue to offer its help and support.

International cooperation plays an important role in novel drug development

(CAS, 2005-06-15)



As an important constituent of the innovative drug research system of China, the CAS Shanghai Institute of Materia Medica (SIMM) is making delightful progress in international cooperation and exchanges. A cooperative agreement inked in March between the institute and French pharmaceutical giant Le Group de Researche Serveier was a recent example.

According to the newly concluded protocol, the Servier group will provide many new efficacious targets for developing new drugs while the national center for screening new drugs attached to the SIMM is to commit itself to conducting a large-scale stochastic screening of the compound samples endemic to China, including natural products documented by traditional Chinese medicine. All of the bio-activated chemicals brought to light by the screening is subject to structural modification and optimization and based on this, a batch of new drugs of originality are to be developed in the strife against various kinds of malignant tremor, disorders at the central nervous system and metabolic diseases. The two sides will be benefiting from sharing the patented rights and economic gains derived from the development.

Another examples include the cooperation with the Swiss Actelion pharmaceutical company. The collaboration has led to the discovery of neuromedin U-1 receptor selective micromolecule excitant. SIMM's joint study with TANABE SEIYAKU Co. Ltd. in Japan on original drug screening led to the discovery of the micromolecule modifying agent of nicotinic type acetylcholine receptor that has high biological activity and brand-new structure. Its strategic partnership with the US Cellomics Company has brought about the establishment of the first drug screening technological platform of high connotation reaching international advanced level and is put into use. These achievements not only advanced the technical level and international fame of China in new drug study, but also laid a solid foundation for downstream development of relevant lead compound.

Cabinet sets out nine steps to fight HIV/AIDS

(China Daily, 2005-06-16)

China is to adopt nine major measures to curb the spread of HIV/AIDS, the executive meeting of the State Council presided over by Premier Wen Jiabao said in Beijing yesterday.

According to the meeting, HIV/AIDS prevention and control will be regarded as a key public health issue in the 11th Five-Year Plan (2006-10).

Specific funds will be included in the budgets of government at all levels for prevention and control programs, the meeting said.

China will continue to provide HIV carriers with free medical care and give free medicines to infected pregnant women to prevent the disease being passed to their babies, said a meeting report.

China is also setting up a national monitoring system for HIV/AIDS to keep abreast of new developments. Great importance has been attached to prevention work among rural residents and migrant workers.

A Chinese expert said last week that China faces a tragic surge in HIV/AIDS cases unless it curbs the spread of the disease among the country's vast transient rural workforce, estimated at about 100 million people.

Official Chinese estimates reckon there are around 840,000 people infected with HIV in the country, including 80,000 with full blown AIDS, according to a Xinhua report.

A new law has just been drafted to protect people infected with the AIDS virus in a country where discrimination against those suffering from the condition is rife, a senior Chinese health official said on Monday.

"China is still facing serious challenges in HIV/AIDS prevention and control, but the Chinese Government is determined and capable of curbing the spread of the disease to ensure people live a healthy and peaceful life," Wen said in a meeting with Peter Piot, executive director of the Joint United Nations Programme on HIV/AIDS on Monday.

Chinese, European scientists find anti-SARS medicine, homologous SARS viruses
(Xinhua Net, 2005-06-19)

A medicine currently used to treat schizophrenia was found to be effective in inhibiting the coronavirus of the deadly Severe Acute Respiratory Syndrome (SARS), announced a group of Chinese and European scientists in Hangzhou, capital of east China's Zhejiang Province, on Sunday.

Cinanserin, being in therapeutic usage against the mental disease since the 1970s, was identified as a cure for the SARS epidemic and is the only ready-to-use medicine among the total 15 possible anti-SARS remedies recommended by scientists participating in the Sino-European Project on SARS Diagnostics and Antivirals (SEPSDA) after careful pathological studies.

"The finding means that cinanserin could be directly prescribed to prevent the SARS disease or treat SARS patients if the fatal epidemic mounts a comeback," said Prof. Peter Kristensen, from Demark's University of Aarhus, here on Sunday.

The 14 other medicinal solutions have to go through lengthy animal tests before being used to treat human patients, said Kristensen, a participant of the three-year SEPSDA program, which was funded by the European Union and involved eight Chinese and European institutions.

The ambitious program, launched in 2004, aims to find 50 chemical compounds to treat SARS. In the coming two years, scientists from China, Germany, Poland and Denmark will continue to search for the rest 35 compounds, according to sources with the program.

In addition, scientists working for the program also confirmed here on Sunday the finding of two homologous SARS coronaviruses in animals from the Netherlands and Hong Kong, China respectively.

Prof. Rolf Hilgenfeld, from Germany's University of Luebeck, said that both the newly-found viruses and the formerly-detected SARS virus were variations of an ancient virus, which had been harbored among animals for ages but remained unidentified.

The German scholar also said other latent coronaviruses could pose dangers to human beings as the SARS virus did. "People should closely monitor such viruses and their variations to effectively prevent them from endangering humans," said Hilgenfeld.

China, WHO to provide AIDS intervention for homosexuals
(China Daily, 2005-06-20)

China and the World Health Organization (WHO) will run a joint project to help homosexuals protect themselves against AIDS in the central province of Hunan beginning this year, state media said.

Beijing-based WHO expert Zhao Pengfei, quoted by Xinhua news agency, said the program would involve spending four million dollars to reach out to homosexual groups in eight areas of Hunan province by 2007.

The program is unusual since homosexuality is still considered a taboo subject in China and China's AIDS prevention programs rarely target homosexuals.

The program will also cover six other cities in Hunan by monitoring AIDS/ HIV infections among homosexuals and providing medical treatment and psychological counselling.

It includes providing male homosexuals with meeting places where condoms and advice on HIV/AIDS will be available.

"WHO will provide technical support for all the activities," said Zhao.

Trial operations will be launched in the cities of Changsha and Hengyang before the end of this year, the report said.

AIDS/HIV monitoring and intervention programs were introduced in Hunan just two years ago, but like the rest of China, few such programs are geared towards homosexuals.

During a visit to China this month, the United Nations top HIV/AIDS official urged China to provide more assistance to high-risk groups such as drug users, sex workers and homosexuals.

"The most vulnerable population are at highest risk but they are getting the least attention," said Peter Piot.

China has an estimated 840,000 people infected with HIV, including 80,000 with full-blown AIDS, according to official figures. International groups believe the real figure is much higher.

CAS researchers develop new drugs of natural origin against heart diseases
(CAS, 2005-06-20)

Through a large number of clinical trials over the past 3 years, researchers from the CAS Shanghai Institute of Materia Medica (SIMM) have developed a new cardiovascular drug with a definite effective component extracted from Dan Shen (*Saliva miltiorrhiza*), a medicinal herb widely used in China. It is confirmed to be safe and effective. On May 25, a New Drug Application (NDA) of depsides salts from *Salvia miltiorrhiza* and its preparation for the potential treatment of chronic angina obtained State Food and Drug Administration (SFDA) approval.

Dan Shen (or Chinese Salvia) is a renowned Asian traditional herb, used for centuries to support cardiovascular health. Based on its extract, many pharmaceuticals have been developed in China. For instance, more than three billion such injections are used annually as an alternative approach to treat cardiovascular patients. But until recently, due to a lack of understanding of its efficient components, it is difficult to control the quality of the medicine.

With the support of CAS, Ministry of Science and Technology, and Shanghai Municipal Government, SIMM researchers began their studies on Dan Shen systematically in 1992. Chemical characterization and compositional analysis of the herbal medicine provide the necessary scientific basis for the discovery and development of a new drug of natural origin. They identified that its most effective component is depsides salts from Salvia miltiorrhiza with magnesium lithospermate B as its primary active compound. Based on the discovery, the scientists invented a new extraction process technology with magnesium lithospermate B as the criteria for quality control. The new approach could fully guarantee the drug's efficacy and thus both the drug itself and its preparations have their quality to be subject to an all-round control.

The new drug has a definite effective component, featuring about 80% of magnesium lithospermate B. The fingerprint technology is used for the overall quality control of the medical herbs, raw materials and drug products.

The results in preclinical pharmacological studies of depsides salts from *Salvia miltiorrhiza* indicated that the drug remarkably reduced myocardial infarct size and attenuated ischemic myocardial injury, lowered the oxygen consumption of the myocardium in models *in vitro* and *in vivo*, and had inhibitory effects on ADP-induced platelet aggregation and thrombosis formation. Especially, it has great promise as a drug that it had little effect on hemadynamics within the

recommendable dosage.

China issues 176 safety certificates for genetically modified organisms
(Xinuua Net, 2005-06-23)

China has issued 176 safety certificates for genetically modified organisms (GMOs), according to a national conference on GMO safety held here on Wednesday.

China has made remarkable achievements in GMO safety work since the implementation of regulations on rural GMO safety three years ago, said Vice Minister Zhang Baowen of Agriculture at the conference.

Since 2002, China has issued 176 GMO safety certificates involving paddy, corn, wheat, soybean and cotton, Zhang said. He said China carries out its GMO safety work "scientifically, prudently, rationally and realistically", and in accordance with international practice.

A series of strict tests are needed before the issuance of GMO safety certificates, according to the Ministry of Agriculture.

During the conference, 74 experts were elected as members of a national commission on rural GMO safety.

Regional forum, exhibition for Chinese medicine concludes in Macao
(Xinhua Net, 2005-06-25)

The three-day Pan-Pearl River Delta Forum and Exhibition for Chinese Medicine ended in Macao on Thursday at the Macao Tower, a multi-functional convention center.

Some 400 professionals, researchers and governmental officials,mainly from China's Pan-Pearl River region, participated in the event.

Among them were 48 experts who launched a theme forum on Chinese traditional medication and seven workshops.

Over 20 cooperation agreements have also been inked by representatives of companies at home and abroad.

Yeung Tsun Man, member of the Macao's Science and Technology Council, told a press conference at the conclusion of the event that the forum has cemented a platform for Chinese traditional medicine to gain access to the international market.

Rapid development witnessed in livestock & poultry vaccine technology system
(MOST, 2005-06-28)

Supported by the 863 Program of MOST and aiming to promote immunological competence and safety of genetic engineering vaccines, China's livestock & poultry genetic engineering vaccines and immunological adjuvant technology system witnessed significant progress. Based on the cloning of the related genes used in the antigen or vaccine research and development activities, a stable carrier with a highly efficient expression has been constructed and the safety assessment system and scale production technology for genetic engineering vaccines have been put in place and further improved.

In addition to successful development of the bivalent genetic engineering vaccine for the avian infectious bursal disease (IBD), 4 types of DNA vaccines (such as the nucleic acid vaccine for porcine reproductive and respiratory syndrome), the genetic engineering lactobacillus vaccine for rotavirus and the vaccines for avian infectious coryza, a production technology has been constructed and improved for the Min Gene Strain A SA215 three-gene-deleted vaccine for the porcine pseudorabies virus and a complete set of research data has been obtained for the application of the national certificate of new veterinary medicines for SA215 live vaccine for the porcine pseudorabies virus.

All the documentation and data required for the application of new veterinary medicine certificate have been made available for TK-/gG-two-gene-deleted proviral vaccine, TK-/gE-/gI-gene-deleted proviral vaccine and gG-gene-deleted inactivated oil emulsion vaccine for porcine pseudorabies virus, with the TK-/gG-bi-gene-deleted proviral vaccine for porcine pseudorabies virus successfully obtained the national certificate of new veterinary medicine. rH5N3, a high-yield and recombinant avian influenza vaccine strain with molecular labeling, has been constructed, which is 100% protective to the H5N1 sub-type highly pathogenic avian influenza (HPAI) on chicken and ducks and other water birds and eliminated the shortcomings of the avian influenza vaccines currently in use, such as poor antigenicity, uncertain immunological effect on water birds, etc. Experimental researches reveal that DNA vaccines have achieved a protective rate of more than 90% for counteracting toxic substances while the rotavirus genetic engineering lactobacillus vaccine has had an immunoprotection rate of more than 80% with a period of immunity of more than 1 year.

In the meanwhile, significant progress has also been made in the R&D of new and highly efficient avian immunological adjuvant, which will become a major driver in promoting the immunological effect of vaccines for animals. CpG, IL-6 and IL-15 molecular immunological adjuvant are prepared and a technology platform with immunological activity and abundant recombinant plasmid with different lengths and different motif has been built. As the recombinant plasmid realizes mass production, the antibody level of avian influenza inactivated vaccine will be promoted by 2 to 4 times. A massive extraction and purification technology using the improved alkali lysis method for 150L genetic engineering bacteria with abundant CpG recombinant plasmid has been established and recombinant plasmid of high purity has been obtained. In addition, break-through development has also been achieved in the cloning and expression of cytokine gene and coccidium antigen gene with the successful cloning of IL-15, IL-17 and IL-18 avian interleukin and lymphocyte chemokines gene.

Successful development of a new drug for tumor therapy
(MOST, 2005-06-29)

Through the arduous endeavor of the Fourth Military Medical University and Chengdu Hoist INC.,

Ltd., the topic of "Research on Iodine ［131 I］Mituximab Injection", a special project of the state S&T project of "Innovative Drug and Modernization of Traditional Chinese Medicine" achieved significant technical breakthrough and obtained the new drug certificate from the State Food and Drug Administration on April 20, 2005. The product is about to appear on the market.

This drug is characterized mainly by definite mechanism of action (having the targeted effect of being directed at the part of liver cancer and the effect of sealing the target antigen), clear anti-body gene and target molecule and advanced production technology. This drug owns 4 state invention patents, 3 PCT international patents that are on the stage of substantive examination in the US, Europe and Japan. This is the first mab drug in the world used for treating primary liver cancer and also the first tumor targeted anti-body drug in China with independent intellectual property rights. The successful development of this drug is of far-reaching importance to the development of the anti-body drug industry with Chinese characteristics.

1.4 Key Technologies

China, US establish Nano-tech institute
(Xinuua Net, 2005-06-07)

A Sino-American institute specialized in nanometer-related technology will be set up in Hangzhou, capital of east China's Zhejiang Province, delegates from both sides announced Monday.

The institute, jointly sponsored by Zhejiang Provincial People's Government, Zhejiang University and the US-based California Nano systems Institute (CNSI), will include eight research centers in the fields of information technology, biomedical and the study at molecule and nanometer scale.

With an investment of 250 million yuan (30.1 million US dollars), the institute, located in the Zhejiang University, will also incubate and industrialize its research results.

The research base is expected to provide a platform to promote high-tech industrialization and international cooperation, said Mao Linsheng, vice governor of Zhejiang.

Roy Doumani, a CNSI professor, said the cooperation between Chinese and US universities must be innovative partnership that integrates research and education, accelerates applications and fully explores the implications of nano technology.

Breakthrough in robotic animal research
(China News, 2005-06-07)

A mouse can "understand" human speech! Recently, it was observed at the Robot Engineering Technology Research Center of Shandong University of Science and Technology that five mice with micro electrodes implanted on their heads obeyed the computer-generated commands of the research staff, correctly completing commands to, in succession, "turn left", "turn right" and "move forward".

"Animal robots", also known as "robotic animals" or "intelligent animals", are animals whose nervous systems are controlled by human electronic signals, turning them into "robotic" animals. Shandong University's recently completed this series of experiments, using the computer to generate a set of rhythmic electronic signal/codes that were transmitted to the mice brain through the implanted electrodes to reach certain neuro networks that have specialized functions, making the white mice realize left turn, right turn and march forward movements under the control of this neural network.

Project manager Su Xuecheng said that animal robot research is the intersection and merger of electronic communication and biology, creating a new scientific discipline. Following the maturation of this research project, "human electronic signals" will be "life-like" enough to actually or basically resemble signals generated by the body and the brain. At that time, putting computer chips implants inside animals will replace certain neurons of the animals in controlling certain behavior, or replace certain human damaged nerves to help the disabled to recover.

Servant robots? Not just yet
(China Daily, 2005-06-07)

(Robot—“Fei Fei”)

It can speak, sing and dance. It can imitate human emotions. In appearance it resembles a spaceman and goes by the cutesy name of "Fei Fei."

Man-sized Fei Fei, an entertainment robot recently developed by a research team at the Institute of Automation under the Chinese Academy of Sciences, aims to present to the public a true picture of what the robots of today can actually do.

Through a microphone wired to the robot, at the command, "Say hello," Fei Fei raises an arm and waves.

His head has 12 joints that can move freely enabling him to imitate expressions of all kinds of human emotion, from joy, anger, surprise, disgust, sadness, and even fear. Each time he finishes his imitation, he giggles and boasts of his excellent mimicking abilities.

When he laughs, his mouth opens wide and his eyebrows rise. When he is sad, he lowers his brows and eyelids.

On his chest is a screen, which displays a menu list, including emotions and movement appreciation, dialogue, Olympic knowledge quiz and sound imitation among others. Programmed to obey, he readily responds to human commands.

On the right side of Fei Fei's display screen a digital camera is embedded which allows him to snap and process prints in moments.

In a corner, a few meters away, stands Fei Fei's granddad, a first-generation entertainment robot developed by the institute. Compared to Fei Fei, he is shorter and much heavier.

In 2000, assigned by China Science and Technology Museum, Li Chengrong led a research team to develop a robot, which can show school children how communications are conducted between machines and people to arouse their interest in the science. "The first entertainment robot we designed was quite simple and could only hold a basic everyday dialogue," said Li.

The project fired a strong interest in Li, in the science of robotics. In the past, his research interests had mainly focused on sound recognition. And his impressions of robots were confined to the stuff of science fiction novels and films, much the same as the average Joe Public.

In the process of designing the robot, Li increasingly realized that artificial intelligence could be an ideal penetration point for his earlier sound cognition research.

Sound recognition technology is one of the basics for robot development, says Li. "Our research power in the field has an edge even in the world. Our robots can recognize a good deal of vocabulary in different fields."

However, at present, Li admits it is still difficult to break the bottleneck of so-called fuzzy logic, because of the complexity of the Chinese language system. "Even a tiny difference of one word in a sentence will probably denote a totally different meaning," he said.

So sometimes, no matter how loud one shouts at him, Fei Fei remains unresponsive to words which sound slightly different from the instructions programmed in advance by the researchers.

To realize a more natural and intimate dialogue with the robot, Li's research team is working on developing another technology, one that will ensure the robot understands random and free speaking by a person on a particular topic such as entertainment and sports.

Another technical basis of robot development is image recognition which Li's team plan to apply to the next generation of entertainment robots.

At present, several departments in the institute are working together to tackle the subject of facial recognition. Similar to fingerprint identification, the robot can recognize an individual person by detecting the front facial image captured by a color camera.

Intelligent control is another important area scientists are exploring. Compared to the series of entertainment robots developed by the Sony Corporation, which have already realized more advanced movements of bipedicular movement on irregular and tiled surfaces, Chinese scientists have much to do to improve their robots movement co-ordination.

"Imitating human body movements more vividly requires more joints. However, the lack of precision in robotic parts manufactured domestically means our robot is as yet incapable of complex movement," said Li.

China developed rotational flow CO2 laser

(China News, 2005-06-08)

The high-power rotational flow carbon dioxide (CO_2) laser unit was successfully developed by laser expert Li Zaiguang in the "Optics Valley of China" in Wuhan and passed the appraisal on

June 6 According to experts, this new laser unit with independent intellectual property right is the first of its kind in China and the world and has reached internationally advanced level in terms of technical-economic index.

At the evaluation meeting organized by Hubei Provincial Department of Science and Technology, laser experts from Beijing, Wuhan and other areas made appraisal for the 500-watt rotational flow CO_2 laser unit developed by the Wuhan Bolight Sci-tech Development Co., Ltd. This new laser unit takes the initiative to adopt five core technologies, including round metal cavity, rotational flow inside the cavity, interlaced runners, discharge insufflating and cathode gas cooling, and integrates the advantages of axial flow CO_2 lasers and transverse flow ones.

The success draws a full stop to the country's lack of independent intellectual property right in high-precision, high-power gas lasers and dependence on imports in this field. It will play a significant role in boosting the development of China's laser industry.

Robot invented to inspect security of dikes

(China News, 2005-06-10)

Under the 863 Program's (the National High Technology Research and Development Program of China) main theme of robotic techniques, Harbin Engineering University and Gansu Great Wall Submarine High-tech Co. jointly invented an underwater robot to test dikes' security.

Recently, it succeeded in using a remote-control robotic trunk, with light, sound, magnetic multi-sensors and navigation sensors constituting a high-level combined exploratory capability, to form a TB-1 series dike-security under-water robot. In January, the robot had been deployed at six different spots of Yangtze Rive's Gezhou Dam to carry out functional and application experiments and obtained favorable results.

This robotic system can test and detect any structural changes on the surface and the inside of dikes and is usable for in both clean and muddy water environment, reaching depths as much as 300 meters under water.

The success of this robot filled a gap in China's under-water exploratory technology and provided a new and strong tool and method for the dike security needs of China's hydraulic and hydro-electric departments. The robot can also be extensively deployed in deep sea petroleum exploration, port construction, under-water rescue and salvage.

More than 800 m yuan invested into nanoscience

(Xinhua Net, 2005-06-13)

China has cumulatively invested a total of 830 million yuan (about 100 million US dollars) into the development of its nanometer science and technology, according to an ongoing conference on nanoscience held in Beijing.

To date, China has launched more than 100 projects on nanometermaterials and micro electromechanical systems which will help liftits capabilities in producing nanometer materials used for information, medical use, environmental energy and other purposes, reported Friday's People's Daily.

More than 10 projects are already in the process of industrialization, in which nanometer materials will be used to produce lithium and solar energy batteries, textiles and environment-friendly paintings.

As one of the first nations to carry out nanometer research, China currently has more than 3,000

researchers who are engaged inrelated programs and have had series of innovative achievements, said Bai Chunli, director of the National Center for Nanoscience and Technology and vice-presidnet of the Chinese Academy of Sciences, at the China International Conference on Nanoscience and Technology.

With attendees from across the world, the conference will be held from June 9 to 11 in Beijing and is expected to create more effective networking among scientists, institutions and companies in the field and promote international and interdisciplinary collaborations in nanotechnology.

Nanotechnology was listed as one of key component parts of China's technology development move during its 10th five-year (2000-2005) planning and the development of nanometer biological and medical technology, electronics and components were rated as mid- and long-term goals.

ChinaNANO 2005 is held in Beijing
(CAS, 2005-06-13)

Supported by the CAS-affiliated National Nanoscience Instruction and Coordination Commission and organized by the National Center for Nanoscience and Technology of China (NCNST), the China International Conference on Nanoscience and Technology 2005 (ChinaNANO2005) was held from June 9 to 11 in Beijing. Prof. Bai Chunli, CAS Executive Vice President & the Director of NCNST, chaired the conference.

CAS President Lu Yongxiang sent his congratulations to the gathering. He says that as one of the most prioritized fields in world major economies, studies in nanotechnology may not only reveal the new principles and phenomena of matter, but also lead to a new industrial revolution. He hopes that the ChinaNANO2005 will have significant influence on the research into frontier issues in the field and on the application in industries, providing further service to society.

Prof. Bai Chunli made a plenary presentation at the conference. While reviewing the recent achievements of nanoscience and nanotechnology in China, he analyzed the problems and challenges facing Chinese researchers in the fields. He pointed out that importance should be attached to the upgrading innovation capacity on the basis of nano-science and technology and promoting its integration and interdisciplinary studies with nano devices and medicine.

Prof. S. Iijima from the National Institute for Advanced Industrial Science and Technology in Japan and Prof. Charles M. Lieber from Harvard University in US were also invited to give a plenary speech at the conference.

As the largest conference in the field ever held in China, ChinaNANO2005 has attracted great attention from the international scientific community. More than 1,100 abstracts have been received. More than 800 scholars from more than 40 countries participated in the four-day

conference. 90 or so renowned scholars in the field were invited to give presentations at planetary conference and sub-conferences. In addition, 400 oral presentations were made on a wide range of themes such as nanomaterials and preparation; self-assembly technology; nanoelectronics devices and nanophotonics devices; MEMS and NEMS; nanobiotechnology, nanomedicine, characterization and measurement of nanostructure; computation and modeling at nanoscale; consumer nanotechnologies and applications.

China launches laptop computer-based network campus scheme
(Xinhua Net, 2005-06-14)

China Education and Research Network (CERNET) has launched the "New Network Campus" program, which is based on the wide use of laptop computers in the prestigious Qinghua University.

According to a 3-year-plan, CERNET will build wireless campus networks in 100, 200 and 500 institutions of higher learning in 2005, 2006 and 2007.

In the meantime, CERNET will work with computer giants Lenovo, IBM, HP, DELL and SAMSUNG to supply cheaper brand-name laptops to students. The computers may be cheaper by several thousand yuan (1 US dollar equals 8.27 yuan) than the market prices.

CERNET will provide 50,000 laptops to students this year and 300,000 more in 2006, according to the plan.

With the scheme in operation, college students may enjoy network teaching platform, IP phone call, IPTV and other special services. Students will be able to work in dorm rooms, classrooms, dining halls and libraries and surf the Internet from anywhere on campus using the wireless network.

China surpasses traditional scientific powers in standardizing nano-tech
(Xinhua Net, 2005-06-21)

After leading the world in promulgating the first batch of nanotechnological standards, China has launched an ambitious plan to develop a whole package of standards which might reshape world nanotech competition.

The newly-established national nanotechnology standards panel coordinates governmental branches and research institutes to speed up the standards setting process.

Bai Chunli, vice president of the Chinese Academy of Sciences (CAS), said here Monday in an interview with Xinhua, "Most developed nations are ready to announce their own standards in this field, but we still have no international standards."

"The country which completes the standardization work first might greatly influence the future international standards in nanotechnology," said the CAS academician who directs China's National Center for Nanoscience and Nanotechnology.

The national nanotechnology standards panel will decide terminology, measurement and manufacturing norms in nanotechnology.

Since the 1950s, scientists have studied the movement and characteristics of particles at the nanometer scale, which is one billionth of one meter. Resulting discoveries have led to technological breakthroughs in material manufacturing.

Experts estimate that by 2010 the global market of nanotechnological products will be valued at 1.5 trillion US dollars.

The Scientist, an American academic journal, said that from January to August 2004 China had presented 3,621 research papers on nanotechnology, more than any other country, as tabulated by the Scientific Citation Index. It published 14 percent more theses than the United States.

Chinese scientists are not only good at basic research in nanoscience, they are keeping pace with world leaders in manufacturing new nanomaterials.

With an eye on setting a favorable gambit for future competition in technological development, the United States, Japanand some European nations are enthusiastic about working out nanotechnology standards and persuading the International Standardization Organization to employ their respective standards.

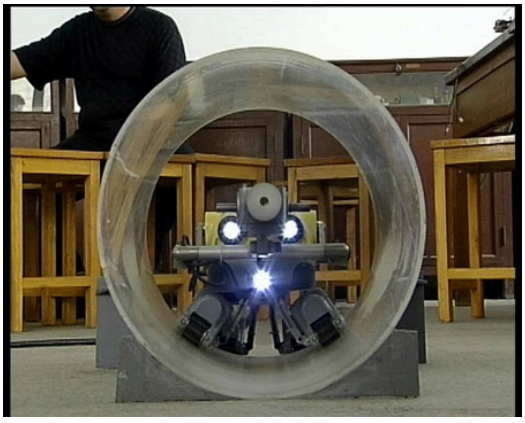
Li Zhonghai, director of the National Standardization Committee,said, "Our scientists are at the cutting edge in nanotechnology, so we're confident we will bring our national standards to the international regime."

In 2001, the Chinese Ministry of Science and Technology listed nanotechnology standardization into the national basic research project. An official with the ministry said an overall standards system has already been drafted. The other 15 new standards will be publicized soon.

Zhang Xian'en, director of the ministry's basic research department, said, "It's wise for us to preemptively set our standards in nanotechnology, since it might produce big money in the coming two decades."

Central air conditioner-cleaning robot developed

(People's Daily, 2005-06-22)



(The Cleaning Robot in the Experimental Tunnel)

Shanghai-based Donghua University has developed a robot specially for cleaning central air conditioners. It is the first air duct-cleaning robot for which China has its own intellectual property rights and has applied for four patents. Currently dozens of cleaning companies have contacted with the university for commercialization, according to report by Shanghai's Oriental Morning Post.

32 centimeters long, 16 centimeters wide and 21 centimeters high, the robot looks like an electronic toy but outdoes any other products of its kind in China even the world in terms of technology and performance.

According to Mao Limin, member of the research group for the robot, robots developed by foreign countries have difficulties in climbing steps and slopes as they move forward with wheels or double caterpillar, while the newly-developed robot can mount steps of 93 millimeters high and slope of 34 degrees.

Compared with the world advanced level of 200-millimeter rectangle duct, the robot can be used in rectangle duct of 150 millimeters high or below and tube with a diameter of 250 millimeter or above. It is suitable for inspection in small-caliber tube and cleaning and sanitizing in air conditioner duct. The robot can deal with any sophisticated duct.

Mao said, with some renovation and special design, the robot can be used for lunar probe mission.

RFIC chips for PHS handsets industrialized

(People's Daily, 2005-06-23)

Comlent, China's first fabless radio-frequency integrated circuit (RFIC) design house headquartered in Shanghai announced recently that it has begun batch production for RFIC chips for PHS handsets. This is the first time that Chinese company makes breakthrough in industrialization of RFIC chips for PHS handsets.

Comlent's transceiver eliminates the costly surface acoustic wave (SAW) filter required by most existing transceiver solutions and it includes an integrated VCO and fractional-N PLL. This high level of integration has greatly reduced costs and features distinctive price advantage. Therefore many famous PHS handsets manufacturers from home and abroad have adopted Comlet's design and released handset based on China's newly released standard "separation of handset and sim card".

Statistics show China now has more than 72 million PHS handset users. The number has increased by 25 million annually during the past two years. Aside from Japanese PHS chips makers, manufacturers from the United States, ROK and Taiwan have come to China trying to grab a share.

Camera recognizes crooked faces

(China Daily, 2005-06-23)

Criminals might have a more difficult time in the future: Cameras with face recognition (FR) technology will be able to identify them instantly.

At the 2005 International Forensic Science Equipment Exhibition, which opened yesterday at the Military Museum of the Chinese People's Revolution in Beijing, Sinocome, a Chinese company, demonstrated its FR system.

Sinocome President Ma Xin said the system would greatly enhance Chinese police's ability to trace suspects.

The system can be fixed in busy areas open to the general public, such as airports, railway stations, subways, stadiums or in private places such as residential communities or office buildings.

The system's surveillance camera takes instant photos of everyone who passes the lens and sends them to a database for processing and authentication.

All the work will be done within seconds, and if a suspect is detected, a siren will sound.

The system can also be used with a mobile phone containing an FR chip.

A police officer can take a suspect's photo and send a picture message to the database and receive answers in several seconds.

Ma said the company, which made its breakthrough last year, has full intellectual property rights on the technology.

Police in 10 provinces have begun using the device and the Ministry of Public Security plans to create a national database of criminal suspects, said Ma.

An expert on 2008 Beijing Olympic Games security issues, Ma said the device will probably be used during the Games.

"FR technology is the most advanced means of authentication so far because it is non-contact, very efficient and without intrusion or delay," he added.

Face recognition is superior to fingerprint recognition because fingerprints can be duplicated or spoilt.

Face recognition is very difficult to fool, Ma said.

The approach works by comparing facial features - specific proportions, bone structures and angles that cannot easily be concealed by beards, eyeglasses or makeup.

Technological advances by other leading companies will also be on display at the exhibition, which was organized by the Ministry of Public Security.

The exhibition will continue until Saturday. About 100 busineses worldwide displayed their products.

Robot cleaner and guard ready to serve

(China Daily, 2005-06-26)

Sweep the room, sir? Yes, sir. Obstacles in the way? Not a problem, sir. And by the way, we have an unwelcome visitor, sir. ...

China's first robot for use around the house is expected to be available by the end of the year from the Harbin Institute of Technology (HIT) in Northeast China's Heilongjiang Province. Robot cleaner and guard ready to serve. Robot cleaner and guard ready to serve Province, university researchers said on Friday.

Hong Bingrong, the professor in charge of the programme, told China Daily that the university is developing a humanoid robot designed exclusively for family use.

The half-metre-tall wheeled robot can talk, do the vacuuming and guard the house. It can clean a 30-square-metre room within 20 minutes using its built-in vacuum cleaner.

With ultrasonic and other sensors around its body, "it can carefully avoid obstacles and will not hit people or furniture in the room," Hong said.

The robot can also distinguish people using voice and image recognition systems.

"He will be friendly when he meets an acquaintance and will sound an alarm when he meets somebody he doesn't recognize," Hong said.

The robot can also tell its owner if certain domestic emergencies are happening. "Basically, its intelligence is like a child of 7 or 8 years," Hong said. It can even be programmed to know where to recharge itself once its battery gets low.

The whole idea of the design and development of the domestic robot is based on the "self-navigation" technology Hong and his colleagues developed after forming a Robot-Soccer Player Research Group at HIT eight years ago.

The players Hong and his colleagues designed achieved considerable success, including top prizes in the Robot World Cup.

The outside design of the robot is already completed, Hong said, and the whole thing should be finished by the end of this year.

Its market price will be between 10,000 and 30,000 yuan (US$1,200-3,600) depending on the various functions.

What's next? A robot sweeper and home security system is one thing, Hong said, but "it may take

us decades to develop a robot housemaid like a real one."

1.5 Structure of Matter

Proposal for a spallation neutron source in China passes the scrutiny of a panel
(CAS, 2005-06-08)

A CAS proposal for the establishment of the Chinese Spallation Neutron Source (CSNS) received support from a 19-member expert panel on June 1 in Beijing. CAS Executive Vice President Bai Chunli, CAS Secretary-general Li Zhigang and Shen Zhulin from the National Commission for Development and Reform also attended the conference.

Neutron scattering technology is currently one of the most important tools for the studies of microstructure and dynamic process of matter. It is widely used in various basic and applied fields, ranging from condensed matter physics, chemistry, biotechnology, materials sciences, nano-science and technology, nuclear physics and medicine. Spallation neutron source, a state-of-the-art neutron scattering facility, could produce neutrons by GeV protons colliding a target of heavy metal. It has advantages of high pulse flux of neutrons and no long periodic nuclear wastes. Importance has been attached to the source in advanced countries, such as those in EU, Japan and the US.

The idea of CSNS for basic research germinated from a visit to the ISIS facility in the UK in 2000 by a CAS delegation led by President Lu Yongxiang. CAS researchers from the Institute of Physics and the Institute of Higher Energy Physics have carried out on the feasibility studies on the project for about three years.

After listening to reports on the project by a research group, the panel had an in-depth discussion on the proposal. They reached a consensus that the plan to set up a spallation neutron source with an average beam power of 100 kW and at a repetition rate of 25 HZ is in conformity with the customer's demands, investment scale, construction period, technology feasibility, and China's actual conditions. The experts noted that the pre-research by CAS researchers have laid the groundwork for the inauguration of CSNS. Considering the rapid development of the source in the world and its urgent needs in the country, the panel made the suggestion that the government approve the proposal as a national big science project as soon as possible.

Work starts on Shanghai Synchrotron Radiation Facility
(People's Daily, 2005-06-22)

News from the Chinese Academy of Sciences says that China's largest big-science equipment and big-science platform so far ¨C the Shanghai Synchrotron Radiation Facility has started the first-phase project of its main construction.

With a total investment of 1.2 billion yuan it is expected be completed and put to operation in the first half of 2009. Once it is completed it will be the world's fourth largest in terms of energy and will have a life span of more than 30 years.

Construction of Shanghai Light Source is in sound progress

(CAS, 2005-06-27)

(The nautilus-like main building of Shanghai Light Source.)

Sponsored by CAS and Shanghai municipal government with support from the State Council, the Shanghai Synchrotron Radiation Facility (dubbed Shanghai Light Source or SSRF) is under smooth construction. When completed in 2009, it will be comparable to the best similar facilities in the world, serving as a state-of-the-art research platform for various disciplines, ranging from life sciences, new materials, environment to pharmaceutics.

Located in the Zhangjiang Hi-tech Park in the southwest suburb of Shanghai, the first-stage of the project will cover an area of about 200 thousand square meters. The nautilus-like main building will have 36 thousand square meters in floor space.

With an investment of more than 1.2 billion yuan (or US$144.5 million), the facility is the largest mega-science installation ever built up so far by China for the purpose of scientific research. After facility is put in operation, the third-generation synchrotron light source with more than 60 beamlines and about 100 experimental stations will enable tens of hundred researchers from different disciplines to carry their studies in the facility.

1.6 Transport and Space

Satellite put into service against floods

(Xinhua Net, 2005-06-10)

A Chinese satellite has recently been put into service to send top-quality photos which will help monitor the country's approaching main flood season, said the country's weather watchdog.

The Fengyun-2 C, a synchronous meteorological satellite designed, manufactured and launched by China itself, commenced its operation on June 1 and played a significant role in monitoring the cloud and ground situation in flood areas in south China, said Yangjun, director of the National

Meteorological Satellite Center under the China Meteorological Administration.

It is capable of sending back clear nephograms and high-quality data products which will help provide effective meteorological service during main flood seasons, said Thursday's People's Daily.

"Fengyun-2 C has monitored heavy rainstorms and ensuing waterlog in south China," said Yang.

Fengyun-2 C is scheduled to start collecting and sending back information related to rainfall, wind and clouds incessantly after June 15 and will be focused on the monitoring of items including typhoons, precipitation, fire, drought, fog, snow and hail.

China, EU to sign seven contracts for Galileo program

(Xinhua Net, 2005-06-10)

Galileo Joint Undertaking (GJU) and National Remote Sensing Center of China (NRSCC) will sign seven contracts soon, said a GIU official Thursday.

The cooperation between China and European Union (EU) on satellite navigation is "crucially important" and expected to have a very successful future, said executive director Rainer Grohe in press release about the NRSCC officials' meeting.

"We have many other countries which expressed interests to participate in the Galileo program, but as far as I can see, none of these potential partners is ready to contribute as much as China does," he said.

According to Zhang Guocheng, acting director of NRSCC, the seven projects in the segments of space, ground and applications will be contracted to Chinese companies and organizations by the end of July.

Zhang also said the first test satellite for the program will be launched by the end of this year, and China will send experts to attend the launching ceremony.

EU and the European Space Agency launched the Galileo Program in March 2002 to develop a satellite-navigation system independent of the US military-monopolied global positioning system (GPS).

With an investment of roughly 3.5 billion euros, the program will launch 30 navigation satellites, which will provide remote sensing data with resolution of up to one meter. The EU estimated that by 2020, the Galileo Project will bring Europe tens of billions of euros in revenue and tens of thousands of job opportunities.

According to a cooperation agreement signed by the NRSCC and the Galileo Joint Undertaking last October, China pledged to invest in research and development on space technology, ground equipment and application systems for the Galileo Program.

As the first non-EU partner for the program, China agreed to invest 200 million euros, including 70 million euros in the first phase of the cooperation.

China completed simulation test for lunar probe program

(China News, 2005-06-17)

According to the *Oriental Morning Post*, China's lunar orbiter *Chang'e I* is expected to be launched in 2007. Giant radio telescopes on the ground will be ready to monitor and trace the orbiter all the time. Now the development and construction of Chang'e I are still in progress; however, astronomical observatory has begun simulation tests ahead of time.

Sources from the Shanghai Astronomical Observatory (SHAO) of the Chinese Academy of

Sciences confirmed that the observatory, the National Astronomical Observatories, Chinese Academy of Sciences, Commission of Science Technology and Industry for National Defense, and China Aerospace Science and Technology Corporation jointly completed the simulation test and managed to receive the weak signals similar to those from objects over 300,000 km away.

Wei Wenren, principal engineer of the VLBI (very-long-baseline-interferometry) division of SHAO, said that the *Chang'e I* was expected to enter the space 300,000 km away from the earth. To ensure the distant observation of *Chang'e I* by radio telescopes, China's astronomical observatories have to carry out tests that send out analogue signals similar to those from the orbiter 300,000 km away.

According to Wei, due to its advantages of high altitude and vast visual field, the Urumqi Observatory of the National Astronomical Observatories was assigned to carry out the test.

China-made TY-5B ejection escape system a hit at Paris Air Show

(People's Daily, 2005-06-21)

An aircraft life-support system, produced by Aerospace Life-support Industries Ltd. under China Aviation Industry Corporation I, is on show at the 46th Paris Air Show. The system has drawn great concerns from famous British and Russian life-support equipment companies, reported Ji Hongsheng for People.com.cn on June 17. The aircrew escape system has been installed in the aircraft exported to Pakistaan. This is the second time that the system is exhibited at the Paris Air Show.

The Aerospace Life-support Industries Ltd. is the only big-sized enterprise group in China undertaking the research, design, experiment and production of aircrew escape system.

The third-generation ejection system, TY-5B, includes rocket ejection seat, individual equipment and parachute. The system is a result of many years' research, production and development, and installed with a multiple program-controlled system with excellent high-speed protective performance. One of the advanced ejection escape systems in the world, it features good performance, high reliability and sound maintenance. It has been installed on the planes, being exported to Pakistan not long ago.

By adopting advanced international technologies, the system can insure safe escape in the flight height from 0 to the maximum climbing altitude, in the level flight range from 0 to 1,200 kilometers/hour and in unfavorable low-level flight.

The company also exhibited its passenger seat Model KKY 300 for the first time at the show. The seats have been installed on the three "Xinzhou Model 60 planes, which were exported to Zimbabwe not long ago.

China to launch first seeds satellite in 2006

(People's Daily, 2005-06-21)

China's first "seeds satellite" will blast off in 2006. The "seeds that return from the outer space" will bring about more "space foods" for people.

As journalist learns from the Chinese Academy of Science and Chinese Academy of Agricultural Science, research work for a scientific experimental satellite dedicated to space breeding has begun, and the satellite is expected to blast off in the latter half of 2006.

The "seeds satellite" is expected to carry 250 to 300 kilograms seeds, including seeds of grains, vegetables, fruits and trees. To ensure the seeds' safe return, experts will create a favorable

environment for seeds in the reentry capsule by taking waterproof, humidity and temperature into account.

Satellite to monitor viruses

(Shanghai Daily, 2005-06-21)

China and France are planning to set up a satellite-based positioning system to monitor how viruses such as SARS "travel" in the atmosphere, scientists said this week. The Pasteur Institute of Shanghai, which specializes in biomedical research, will provide a task force for the project.

It also plans to coordinate with various Chinese government sectors and institutes to establish the country's first such supervision network.

That includes the Ministry of Agriculture and the Resource Satellite Application Center.

Vincent Deubel, director of the Pasteur Institute of Shanghai, was quoted by *Wenhui Daily* on Tuesday as saying: "We hope to set up a Shanghai-based supervision network to monitor the movement of infectious diseases within China.

"This network will greatly improve public health in prevention of all kinds of infectious diseases," he said.

One institute researcher said since infectious viruses always move in the atmosphere and clouds, satellite-based research will help pinpoint their location and prevent the communication of viruses in advance.

Deubel said after scientists acquire information concerning climate and geology in different areas of the country, they can analyze trends in how viruses infect people and animals.

Then they will complete a prevention report to the central government to take preventive measures, if needed, he added.

Deubel said the Chinese Academy of Sciences, the city government and two French companies may invest in the project.

Officials of the institute yesterday declined to release detailed information, saying "it is still on the way." They also declined to comment on the cost of the project.

Chen Zhu, vice president of the Chinese Academy of Sciences, was quoted by *Wenhui Daily* on Tuesday as saying: "This prevention network is one of the hottest fields of study in global research."

The Pasteur Institute of Shanghai is not for profit and was co-established last year by CAS, the municipal government and Paris-based Institute Pasteur.

Hainan Island eyes satellite launch pad

(China Daily, 2005-06-21)

China is likely to build its fourth satellite launch centre in the southern island province of Hainan.

The provincial government is working to persuade the central government to approve the massive project, which is expected to be located in Wenchang, in the northeast of the island.

Local media reported that an expert panel has approved a preliminary feasibility report by the provincial government.

But economic planning officials said the report was just the start of the complicated application process.

"There is still a long way to go before the central government finalizes the proposal," said a provincial commission for development and reform official who identified himself by only his

surname, Deng.

He said the project is still "a long-term blueprint," and there is a complicated process before the central government agrees to the project.

The province has not yet offered the report to the National Development and Reform Commission, he said. The national commission must also endorse the plan before the State Council takes its decision.

"The project is still in its preliminary stages," the official said.

But the expert panel is actively pushing forward the proposed project, which could reduce the cost of launching satellites.

A member of the Chinese Academy of Engineering Zhang Yanzhong said that launching Earth-synchronous satellites from centres closer to the equator reduces costs compared with those launched from higher latitudes.

"Hainan is an ideal location," Zhang said.

China's three existing launch sites are in the western and northern regions of Jiuquan, Xichang and Taiyuan, sitting between 28 and 41 degrees north latitude.

Of the four sites, Hainan, located around 19 degrees, would be nearest to the equator.

"This factor is an advantage contributing to efficient and low-cost launches," Zhang said.

Zhang also said a launch centre in Hainan would be safer than other sites.

As satellites launched from Hainan would follow a path over the South China Sea there would be less chance of debris falling on populated areas.

Fighter with Kunlun aeroengine succeeds in first flight
(People's Daily, 2005-06-24)

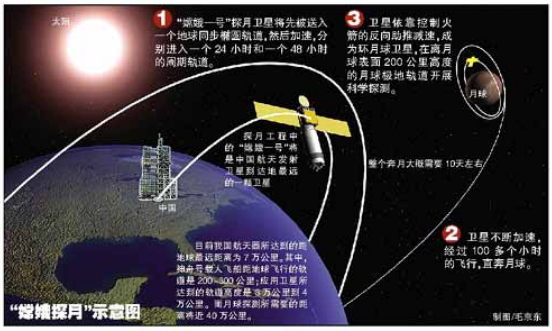
A new-type fighter carrying a home made "Kunlun" aeroengine succeeded in first flight in May at an airport in northeast China, according to Science and Technology Daily's report.

In June, the QD 128 gas turbine, a derivative of the Kunlun aeroengine was delivered to the Daqing oil field. This is the first generator unit for commercial use. The gas turbine is expected to be put into use in July.

Only a few countries in Europe and America have the capability to design and manufacture aeroengine and gas turbine independently at present. With independent intellectual property rights, the Kunlun aeroengine and its derivative QD 128 light gas turbine have filled the void in China and shows the bright future of China's aeroengine industry.

On May 20, 2002, China's first independently designed aeroengine - Kunlun turbojet engine passed appraisal for finalization of design in Shenyang.

China to produce components of its first lunar orbiter
(China Daily, 2005-06-25)



Preliminary designs of China's lunar probe program, "Chang'e Project", have been completed and are now being turned into formal ones. Production will begin soon for components needed in this project, which was launched in February 2004.

380,000 kilometers from the earth, the moon is of rich resources and has been a relay station between humankind and deeper space. Many countries have taken lunar probe one of its important space projects. China's lunar program is divided into three stages: orbiting, landing and returning.

China plans to launch its first lunar orbiter "Chang'e I" before 2007, which will for the first time in the world carry with it microwave remote sensing devices to conduct careful and in-depth probe into the lunar surface. Before the launch, a "sky base" will be constructed at an orbit about 200 kilometers from the ground to provide supplies. It needs around 10 days, as expected, to reach the moon.

Since the successful launch of the country's first man-made earth satellite "Dongfanghong I" 35 years ago, China has scored great achievements in the field of space exploration, indicating visible improvement in the national comprehensive strength.

However, there are still major problems to be solved. The industrialization of the aeronautic sector needs more propellant.

2 News From Universities

HKUST to select five high-impact research areas

(Xinhua Net, 2005-06-08)

The Hong Kong University of Science and Technology (HKUST) announced Tuesday that it will focus on five high-impact research areas and establish two new institutes in the coming 15 years.

Among the key proposals of the "Building on Excellence 2005-2020 Strategic Plan", the university will focus on a range of carefully selected high-impact research areas, establish the Hong Kong Institute for Advanced Study, and open a School of Innovation and Technology Management.

According to the university's president Professor Paul Chu, five high-impact research disciplines are detailed in the plan, specifically chosen for their scientific importance and value to social and economic development.

The chosen disciplines include nano-science and nano-technology;biosciences and biotechnology; electronics, wireless and information technology; sustainable development and management education and research. To meet the needs of its public and private sector partners, the university

is establishing the Hong Kong Institute for
Advanced Study, which will drive major interdisciplinary advances.

For the School of Innovation and Technology Management, it will help train the next generation of technologists and entrepreneurs.

With a novel curriculum, including an undergraduate degree in innovation and technology management and cutting-edge postgraduate research opportunities, the school will develop skilled graduates for careers across business, engineering and technology-related fields, said Professor Chu.

In addition, the university will work to extend its impact on higher education in the mainland. An independent graduate school and a research and development facility will be established in southern part of the mainland. These will both contribute further to social and economic development, nationally and regionally.

HK scholar ranks No. 8 worldwide in IS publication productivity
(Xinhua Net, 2005-06-09)

Professor Patrick Y. K. Chau of the University of Hong Kong (HKU) was ranked 8th productive information systems (IS) scholar worldwide, announced HKU on Wednesday.

Chau is a professor of Information Systems and Associate Dean of the Faculty of Business and Economics of HKU. The result came from a study on publication productivity of IS researchers which was published in the recent issue of the Communication of the Association for Information Systems (CAIS).

Chau published 12 papers, ranked No. 8 worldwide and was the only scholar in Asia on the top 10 list. The top 10 IS researchers include scholars from University of Central Florida of America, University of Colorado of America and University of British Columbia of Canada, etc.

"I am very honored by the ranking," said Chau, "It certainly encourages me to devote greater effort to IS research." One of his recent research projects is how firms in China are assimilating Internet technologies in their business operations to improve their efficiency. He hoped the research results can help companies in the Chinese mainland gain further competitive advantage.

Chau joined the School of Business of HKU in 1999. In 2000, he developed the double-degree undergraduate program in Information Systems and Software Engineering at HKU with an aim to nurture information technology specialists for the business communities in Hong Kong and the mainland.

CAIS is an official publication of the Association for Information Systems which has its headquarters in America and it is the premier global organization for academics specializing in information systems with more than 4,000 members worldwide.

75 % of Chinese universities in great need of patent application
(People's Daily, 2005-6-18)

Entrusted by State Intellectual Property Office, Zhejiang University of Technology has just concluded a special survey and study recently, which shows the patent application by 75 percent of the colleges and universities in China are extremely few and even none.

The special survey shows there are huge gap in patent application among all the domestic colleges and universities. Tsinghua University, Fudan University, Shanghai Jiaotong Unviersity, Zhejiang University and South China University of Technology have applied a total of 4,809 patents in the

past five years, accounting for 26.5 percent of the nation's total. Zhejiang University and Zhejiang University of Technology have applied 91.7 percent of all 1,706 patents done by colleges and universities in the Zhejiang province over the past five years.

Meanwhile, the survey also shows that the loss of scientific and technological achievements, either caused by plagiarism or by the flow of personnel, exists in nearly 30 percent of the colleges and universities across the country. In some higher learning institutions, a considerable proportion of teachers and researchers partly release from their regular work and run their own business with invention and research results from schools. Although various higher learning institutions have set up special departments to manage research findings, loopholes still exist in the current management mechanism.

USTC creates a new department of systems biology

(CAS, 2005-06-30)

In cooperation with CAS Shanghai Institutes for Biological Sciences (SIBS), the University of Science and Technology of China (USTC) has launched a new department of systems biology. It is China's first such department that based on theoretical science and experimental research. The nameplate-unveiling ceremony was held on June 28 at USTC, an educational arm of CAS headquartered at Hefei, capital of east China's Anhui Province.

Systems biology is an emerging field that seeks to study an organism, viewed as an integrated and interacting network of genes, proteins and biochemical reactions which give rise to life. Instead of analyzing individual components or aspects of the organism, such as sugar metabolism or a cell nucleus, systems biologists focus on all the components and the interactions among them, all as part of one system. These interactions are ultimately responsible for an organism´s form and functions. The Harvard Medical School established the first department-level systems biology programs in US in 2003.

According to the plan, while basing its daily education and routine operation at the USTC School of Life Sciences, the new department will keep close relationship with other departments and schools of the university as well as SIBS, encouraging experts from various disciplines to take part in its research and teaching.

The founding chairman of the new department at USTC is Prof. Wu Jiarui, vice president of SIBS. He graduated from the Department of Biology, Zhongshan University in Guangzhou in 1982, received his master's degree in the CAS Institute of Genetics in 1985 and a doctoral degree from Swiss Federal Institute of Technology in Zurich in 1994. He was a postdoc in Department of Biochemistry and Molecular Biology, SUNY, Health Science Center in Syracuse of the US from 1994 to 1997.

Chaired by Prof. Li Qishui, a CAS member and dean of the USTC School of Life Sciences, the nameplate-unveiling ceremony was attended by high-level administrators and renown scholars in the field, including USTC leaders Guo Chuanjie, Zhu Qingshi, Cheng Yi, Hou Jianguo; Director of Basic Sciences under the Ministry of Science and Technology Zhang Xian'en; Assistant Director of CAS Bureau for Life Sciences and Biotechnology Tian Yan; Director of the CAS Institute of Biochemistry and Cell Biology under SIBS Li Lin; Deputy Director of CAS Institute of Biophysics Xu Tao; Deputy Dean of School of Life Sciences of Fudan University Zhong Yang; Director of Bio-X Life Science Center of Shanghai Jiaotong Univesity He Lin; Executive Director of Chinese National Human Genome Center in Shanghai Zhao Guoping and Chair of Department

of Systems Biology of Huazhong University of Science and Technology Liu Bifeng.

3 Innovation Management

Breakthrough in independent innovation in Zhongguancun Science Park in 2004 (MOST, 2005-06-01)

Zhongguancun Science Park is an pool with the most abundant and the most concentrated resources for innovation in our country. In light of the objective put forward by the State Council for "One Step up in Every Five Years" and in line with Executive Summary of One Step up in Every Five Years, Zhongguancun Science Park made new headways in technology innovation, system innovation and culture innovation in 2004.

I. The technology innovation system with enterprises as the main body is continuously improving and the independent innovation capacity has been further boosted. As of the end of 2004, 41 State engineering centers, 42 key laboratories, 39 incubators of various types and 10 State-level enterprise technology centers had been already set up inside the Park.

II. New breakthroughs have been made in numerous high-tech fields and a number of core technologies and products with independent intellectual property have sprung up.

In the field of electronics and information technology, Dawning 4,000A supercomputer successfully overtook the computation speed of 11 trillion times per second, paving the way for China to become the world's third nation able to manufacture and deploy super computers with a computation speed of more than 10 trillion times per second. TechFaith Wireless was the first to develop and succeeded in designing WCDMA and CDMA 2,000 mobile phones broadly applied in the international market.

In the field of chip design and application, the introduction of ARCA 3G wireless CPU has smashed the CPU monopoly by overseas firms while the successful development of world-leading routers by Beijing Jiaxun Feihong Electric Co., Ltd. represents the capture of key routing technology and security technology required by the Internet of a new generation. Harbour Networks developed the first T bit high-end router inside the country.

In the field of new materials, Innopower Superconductor Cable Co., Ltd. took the lead in out country while ranking the third in the world by developing practical high temperature superconductivity electric cable system.

In the field of environmental protection and new energy, the energy-efficient technology and related products of Beijing Shenwu Thermal Energy Technology Co., Ltd. has saved an accumulative total of over 10 hundred million Yuan in energy source investment for the country.

In the field of biotechnology, Sinovac Biotech Co., Ltd. took the lead in developing the SARS deactivation vaccine. First phase clinical experiment has been successfully accomplished.

In the field of advanced manufacturing, Beijing Timesbright Electronic Technology Co., Ltd. possesses 4 foreign patents of invention for automobile electronics. Its automobile safety early warning system has reached advanced international standards.

The model in the park of good integration of production, learning and research with enterprise as the main part and market and industrialization as the orientation has sought experiences for the country for improving the technology innovation system.

III. The Park continues to advance the system and mechanism innovation and the promoting and supporting effect of various public policies is gradually becoming apparent. In respect of intellectual property promotion and protection, the program of "patent engine" has been initiated and support is given to enterprises concerning their patent research in terms of policy and fund.

And the work for aiding enterprises financially to apply for foreign patents has already been launched. The standard strategy has been started up and financial aid is awarded to enterprises for creating and formulating advanced standards. Two standards of Beijing Tianyuan Network Technology Co., Ltd. have been officially accepted by International Telecommunication Union, which established our country's strategic advantage in the internet of the next generation. Zhongguancun Copyright Protection Center executes "one-stop" office inside the Science Park and enables the copyright owners to handle the business of copyright registration and double software certification without going outside the building. It was in the first place in our country for handling various businesses in the year. Zhongguancun Electronic Product Trade Chamber took the initiative to promote the construction of demonstration market for intellectual property rights.

It is just on the basis of technology innovation, system innovation and culture innovation that Zhongguancun Science Park gained rapid growth in high and new technology industries in 2004. According to preliminary statistics, in 2004, the sales revenue of high and new technology enterprises in Zhongguancun Science Park is predicted to be 3625 hundred million Yuan, an increase of 25.6 % compared with that of the same time last year; payment of 133 hundred million Yuan tax, an increase of 11.3 % compared with the same time last year; total production value of 76 billion RMB, an increase of 25 % compared with the same time last year; earning 4.43 5 billion dollars from exports, an increase of 34.6 % compared with the same time last year. 4,268 high and new technology enterprises were established with 567,000 employees as of the end of the year, an increase of 16 % compared with the end of 2003.

President Hu calls for innovation in science
(CAS, 2005-06-06)

Chinese President Hu Jintao put forward three requirements for the scientific and technological innovation in China when meeting with representatives of a symposium of the Academic Divisiosns of CAS on June 3 in Beijing.

The first is to further make clear the strategic goals for innovation so as to solve major problems in China's economic and social development and achieve new breakthroughs in key and core fields, Hu said.

The second is that China should accelerate the build-up of its own scientific and technological innovation system.

Thirdly, he said, there should be a further fostering of talented people.

Science and technology are the decisive forces in economic and social development in the current world and innovation is a core part of a country's competitiveness, the president said.

China has always attached great importance to the role of the scientists with the CAS, said Hu,

hoping the scientists will make more contributions to the development of Chinese nation.

The symposium was held to celebrate the 50th founding anniversary of the CAS' Academic Devisions. Also present were Chinese Premier Wen Jiabao and Chinese Vice President Zeng Qinghong.

Offering advisory services to S&T development in China

(CAS, 2005-06-06)

The CAS Academic Divisions (CASAD) was established on June 1, 1955. At present, it has six divisions specializing in mathematics & physics, chemistry, life sciences & medical sciences, earth sciences, information sciences and technical sciences respectively. In 1984, the State Council defined its principal function in clear terms, i.e. "the highest advisory body of the State in science and technology" while the CAS membership is "the highest academic title conferred by the State to an individual in the fields of science and technology." Since its inauguration half a century ago, the CASAD has been devoted to the national reconstruction and the society and now, offering advisory and appraising service has become the main function of the CASAD.

The advisory service of the CASAD mainly aims at some key S&T issues concerning economic and social development of the country and national security. At the same time, it undertakes entrusted consultative tasks regarding key S&T problems in national economic development from different administrative departments, sectors, local authorities and the major State-run academic institutions.

The advisory reports made by the CASAD over the past years always attracted a lot of attention from the State Council and its related commissions or ministries. Many of CAS members; proposals contained in them were adopted by governmental departments. This helps bring up and enhance the awareness and perception of science in these departments, which find their expressions in the formulation of their developmental strategies, schemes and plans. Hence, the CASAD reports issued each year serve a consultant role in the decision-making procedures of the country. Some of them exert enduring and substantial influence on the National Long- and Medium- term Plan for S&T Development.

In the half-a-century itinerary of their development, the CASAD has played a key role in bolstering national economic growth and the strategy of sustainable development by offering constructive advice to related departments, making an irreplaceable contribution to the country.

In 1955 at the Inaugural Meeting of the CASAD and the First General Assembly of CAS, many CAS members proposed that a long-term scheme for national S&T development should be drafted as soon as possible. This suggestion was then adopted by the Party's Central Committee and the State Council. In his report about policies of Chinese intellectuals, the late Premier Zhou Enlai first put forward the task to draw up A Prospective Plan of Nationwide S&T Development during the Period from 1956 to 1967. The CASAD organized and mustered CAS members and experts to participate into the Plan's formulation, giving their opinions and proposals on defining the guiding line, fundamental principles, methods, priorities, and cutting-edge technologies and fundamental research. In light of the principle of "developing academic disciplines by conducting State-entrusted research tasks," 57 key R&D assignments and several theoretical research projects for fundamental disciplines were decided. In 1957, emergent measures were proposed for the development of badly needed disciplines in national reconstruction, including aerospace technology, computer science, semi-conductor technology, radio electronics and automation. The

move laid a solid foundation for subsequent high-tech progress in this country.

On October 4, 1957, the former Soviet Union succeeded in launching its first "sputnik" (a man-made satellite). The event led nine CAS members (headed by Zhu Kezhen, Qian Xuesen, Zhao Jiuzhang, and Lu Yuanjiu) to make suggestions on developing China's own satellites. So, at the second plenary session of the CPC's Eighth Congress held on May 17, 1958, Chairman Mao Zedong instructed that ¡°We have to develop the satellite too!¡± Since then, China has further accelerated its pace to advance the development of satellites, rapidly reducing the S&T gap between China and developed countries. In the catch-up process, many CAS members made their indelible contributions.

In May 1981 when the Fourth General Assembly of CAS was in session, 89 CAS members headed by Prof. Xie Xide lodged a joint appeal to the national authorities, proposing setting up a science foundation in China and in the next year, the State Council approved the establishment of the CAS-run Science Foundation opening to the whole country. Based this, the National Natural Science Foundation of China was inaugurated in February 1986 as a result of the institutional reform of national S&T system. The operation of the foundation has since promoted the stable development of basic research of natural sciences in China, updating this country's R&D level and training of talented scientists.

On March 3, 1986, four CAS members, namely, Profs. Wang Ganchang, Wang Dahang, Chen Fangyun and Yang Jiachi, wrote a joint letter to the Party's Central Committee, urging an enhanced effort to track the world's strategic hi-tech progress, in order to grow S&T industry in China. The suggestion was then highly regarded and supported by the national leaders, leading to the formulation and enforcement of the national "Hi-tech Research and Development (863) Program." The past dozen years saw the latter fully play its promoting and rewarding role in accelerating the development of national economy and hi-tech industry.

In September 1992, six CAS members, i.e. Profs. Zhang Guangdou, Wang Dahang, Shi Changxu, Zhang Wei, Hou Xianglin and Luo Peilin, put forward a proposal calling for an early founding of China's academy of engineering and technology. Two years later, the Chinese Academy of Engineering (CAE) was officially inaugurated. A total of 30 CAS members were elected to assume the CAE membership as the first batch of its valid members.

In December 1994, 11 CAS members from the Academic Division of Earth Sciences made a joint proposal for studies on sustainable development through coordinating population, natural resources, the environment and local economies in the arid areas of Northwest China, which received support from State leaders. In September 1999, an advisory report titled "Some Suggestions to Accelerate the Development of China's Northwestern Regions in the 21st Century" was completed by the Division. Opinions and ideas in the report were highly valued and adopted in the draft of both the national blueprints for the national 10th Five-year Plan (2001-2005) and a long-term national development plan up to 2015.

In October 1998, the Academic Division of Technological Science delivered a consultative report under the title "A Suggestion to Accelerate the Construction of a Telecommunication Network in the Chinese Countryside." This led to a joint report submitted by the Ministry of Information Industry and the State Commission of Planning entitled "A Report Concerning the Strategies and Suggestions about Accelerating the Communication Development in China's Rural Areas," which included some ideas in the CASAD report, and the subsequent concrete steps for its implementation, resulting in the success in the establishment of a nationwide broadcasting network accessible to every village across the land.

The CASAD also worked out in time a batch of advisory reports addressing the "hot-spot" problems and pressing issues of the country. In October 1998, for example, CAS and CAE summoned their members and related experts to draft a report titled Our Understanding on the 1998 Deluge in the Yangtze Valley and a Suggestion of Future Countermeasures and submitted it to the national authorities. In the same year, another suggestion to cope with the mainstream dried-up of the Yellow River was worked out and presented to the State Council. As a result, the advice in the report was basically adopted by the Ministry of Water Resources.

Since the advent of the new century, the CASAD Presidium and its Working Committee on Consultation and Evaluation (WCCE) have further enhanced their organization and leadership, paying more attention to the integral strength and disciplinary characteristics of the community of CAS members. Their efforts are concentrated on providing advisory service by addressing some key problems and issues of vital importance in economic growth, social progress, S&T development and national security, by organizing trans-departmental and inter-disciplinary consultant work. In support of the national strategy to develop the Northwest China, the CASAD initiated a grand counseling project "Eco-environmental Construction & Sustainable Development in Western China," resulting in the submission of seven advisory reports to the State Council. To cope with the frequent attack of sand storms, they drafted a consultative report "On the Root Causes & Counter-measures against the Dusty Weather in North China." In the fields of public sanitation and basic research, they worked out two reports respectively titled "An Appeal for Rapid Containment of the Spreading of the AIDS Epidemic in China" and "On the Improvement

& Upgrade of Basic Research in China" to the State Council.

Boasting a community of excellent scientists, the CASAD attaches special significance to fully exploiting the academic build-up, aiming at researches on strategies of disciplinary development. All ADs encourage their CAS members to study developmental strategies for various subjects in line with the objective laws of natural sciences. Based on wide investigations conducted by CAS members under the leadership of the ADs, developmental strategies are mapped out for mathematics, physics, chemistry, biology, earth sciences and technical sciences, including the definition of the key disciplinary realms and crucial problems in need of the State's support. In this aspect, more than 100 consultant reports were submitted to the State Council or its subordinate commissions and departments. The work has formed a scientific basis for the national authorities when formulating related policies and adopting administrative measures.

In August 2004, the CASAD decided to initiate a multi-disciplinary consultative project under the theme of Theory & Practice in the Scientific Concept of Economic Development, highlighting research in four realms, respectively specializing in the resources & environment system, economy & society system, theoretical problems regarding complexity system science and other major problems of strategic importance. Theoretically, this project is to explore into the implication of scientific concept of economic development, by assimilating the theories and methods from complexity science; practically, it aims to elucidate the vital significance in persistence of the concept, As a result, a counseling report with science-oriented, systematic and comprehensive characteristics comes into being as a reference document of high value contributed to every walk of life to study and put in practice the scientific concept on development.

MOST to revise "China High and New Technology Products Catalogue"
(MOST, 2005-06-07)

"China High and New Technology Products Catalogue" compiled through joint organization by Ministry of Science and Technology (MOST), Ministry of Finance and State Taxation Administration in 2000 needs to be revised according to the practical situation. The high and new technology products applying for listing in the catalogue must fall within the established high and new technology fields (electronic information, advanced manufacturing, aviation & space, modern traffic, biology and medicine, new material, energy source and energy-saving, environmental protection, earth, space and ocean, nuclear applied technology and modern agriculture). The deadline for application is June 20, 2005.

Please visit the web site of MOST application for more details in application procedures and relevant requirements.

2005 state key laboratory reevaluation came to a conclusion
(MOST, 2005-06-17)

In accordance with the uniform arrangement of state key laboratory evaluation, reevaluation of the laboratories of mathematical science and geoscience was finished in Beijing on May 24-25 and May 26-27 respectively. The National Natural Science Foundation of China (NSFC) organized this year's evaluation work. Altogether seven laboratories of mathematical science that ranked the first five and last two in the on-site evaluation received reevaluation. The expert team, led by Academician WANG Naiyan, former Vice President of NSFC, was made up of fifteen experts. Altogether twelve laboratories of geoscience that ranked the first eight and the last four in the on-site evaluation participated in the reevaluation. The expert team, led by CHEN Yiyu, Director-General of NSFC, was made up of twenty-three experts.

The expert team listened to the work reports delivered by the laboratory directors, raised queries, held discussions and finally graded the laboratories by open ballot. In accordance with the evaluation rules, NSFC will submit an official report on the final sequence of the laboratories and the work report on this year's evaluation to MOST within one month after the conclusion of reevaluation. After examination and verification, MOST will issue the evaluation results in an appropriate manner.

At the end of the reevaluation meeting, the Department of Basic Research of MOST separately organized the expert teams to carry out study and discussion on laboratory evaluation and arrangement of state key laboratories of mathematical science and geoscience.

Labs warned to follow disease research rules
(China Daily, 2005-06-17)

The Ministry of Agriculture has warned labs nationwide not to experiment on dangerous pathogenic microbes without approval.

An urgent notice issued by the ministry yesterday said experiments on such microbes should only be carried out under close supervision from epidemic prevention authorities.

But officials were keen to stress the notice did not mean there was any imminent danger to the public.

"There has not been an outbreak of any serious disease, we just want to stress biosafety," a veterinary official told China Daily.

According to the official, some research organizations and universities have been experimenting on dangerous pathogenic microbes without permission.

"It's dangerous because some of the labs don't have the proper safety equipment or facilities," he said.

The urgent notice, backed by several cabinet departments, demands labs adhere to cabinet regulations on biological lab management issued last year.

The new regulations were formulated after two people were infected with the SARS (severe acute respiratory syndrome) virus at a lab run by the Chinese Centre for Disease Control and Prevention.

Under the new regulations China grades its biological labs in four levels.

Labs in the first and second grades are prohibited from conducting experiments on contagious pathogenic microbes that can cause severe diseases in humans or animals. Labs in the third and fourth grades can do experiments on such microbes only with the specific permission of health and veterinary authorities.

Yesterday's notice requires biological labs abide by biosafety regulations and warns that the slightest negligence will not be allowed.

According to the rules set out last year, both the head of the institution that owns a lab and the operational head of the lab will be held accountable for any breeches of safety regulations.

World experts discuss public science communication

(Xinhua Net, 2005-06-23)

More than 160 experts from 21 countries convened here Wednesday to discuss effective communication in improving public awareness of science and technology.

At an opening of the 2005 Beijing Working Symposium of the International Public Communication of Science and Technology (PCST)Network, Deng Nan, vice president of the China Association for Science and Technology, said that China pays great attention to improving public scientific awareness.

The Chinese government also understands the role of communication in improving such awareness, Deng said.

She said she hopes Chinese experts could learn from their international counterparts in conducting effective communication of science and technology.

During the three-day symposium, participants are scheduled to analyze 95 communication cases from 20 countries.

Established in 1989, the non-profit PCST has organized its first event in China.

4 China's International Science Cooperation

American chemists pay a visit to the CAS Institute of Chemistry
(CAS, 2005-06-02)

Sponsored by the National Natural Science Foundation of China (NSFC), an 11-member delegation of the American Chemical Society (ACS) paid a visit to the CAS Institute of Chemistry (ICCAS) during their tour in China from 16 to 27, April.

Among the US guests are the President of ACS William Carroll, President of the ACS Committee. James Burke, Acting President. Madeleine Jacobs, Ms. Elsa Reichmains from the Bell Laboratory, Prof. Peter Stang from University of Utah, and Prof. Joan Valentine from the University of California, Los Angeles.

At the meeting ICCAS scientists and ACS visitors shared their recent research development. Prof. Joan Valentine also made a presentation entitled ¡°What makes mutant copper-zinc superoxide dismutase toxic?¡±. Prof. Peter Stang and Mr. Rudy Baum briefed CAS researchers on the Journal of ACS and the magazine Chemical & Engineering News. The guests were showed around in the institute. In addition, Prof. Peter Stang was engaged as an honorary research fellow of the ICCAS.

The American Chemical Society is the largest scientific society and among the best scientific publishing organizations worldwide. During the stay in Beijing, the ACS delegation held talks with high-ranking officials from the Ministry of Science and Technology, the Chinese Association for Science and Technology, NSFC, and CAS. They also met with officers and researchers from Chinese scientific research institutions and universities.

A delegation from the Netherlands visited MOST
(MOST, 2005-06-03)

A delegation of six from the Ministry of Health, Welfare and Sport of the Netherlands led by Mr. Van Riji, Director-General for Health Care in the Ministry of Health, Welfare and Sport held working talks with MOST on the morning of May 12, 2005. SUN Hong, Deputy Director-General of the Department of Rural and Social Development and MA Hongjian, Deputy Director-General of China National Center for Biotechnology Development met with the delegation from the Netherlands. Also present at the talks were Counselor ZHAN Hongqi from Division of Europe of the Department of International Cooperation of MOST and relevant experts from the Chinese Academy of Medical Sciences and China Center for Disease Prevention and Control.

The purpose of the Netherlands delegation's visit to China was to fulfill the spirit of Premier WEN Jiabao on the expansion of cooperation between the two governments in the fields of public health

and environmental protection and further promote bilateral cooperative research in life science and medicine, especially R&D of prevention and cure of infectious diseases, food safety, human tissue and organ and important drugs.

Deputy Director-General SUN Hong gave an introduction of MOST's priority fields of support during the Tenth Five-year Plan:

In the field of medicine and health: prevention and treatment of major infectious diseases, R&D of new drugs, modernization of traditional Chinese medicine, family planning and study on medical treatment appliances;

In the field of food safety: research on monitoring technology, preparation of technical standards and experiment demonstration project;

In the field of modernization of traditional Chinese medicine: quality standardization and quantification of traditional Chinese medicine.

Deputy Director-General MA Hongjian gave a briefing on the main accomplishments of our country in the development of biotechnology drugs, main tasks of our country in the field of biotechnology and the progress of cooperation between China and major countries of European Union in the field of biotechnology.

After discussion, the two sides reached agreement in principle on the following issues:

1. Agree in principle to strengthening bilateral cooperation in the field of prevention and cure of infectious diseases;

2. Agree in principle to strengthening bilateral cooperation in the field of food safety monitoring technology;

3. Agree in principle to strengthening bilateral cooperation in the field of biotechnology and its application;

4. Agree in principle to carrying out cooperation in respect of human heritage resources within the framework of keeping to the relevant regulations of our country;

5. Agree in principle to holding a seminar on the priority development fields for bilateral co-operation. In the days to come, the two sides will further strengthen communication through the liaison people.

"Sino-Sweden Bilateral Seminar on New Materials" convened in Beijing
(MOST, 2005-06-06)

In order to promote bilateral exchange and co-operation between China and Sweden in the field of material science and engineering, the Sino-Sweden Seminar on New Materials cosponsored by MOST and the National Bureau of Innovation of Sweden was recently held in Beijing. Over 40 people including experts and scholars from research institutions, universities and enterprises of both countries and members of the expert team of the State 863 Program attended the seminar. Chairmen of the conference were professor TIAN Zhiling, Expert Team Member of 863 Program and Prof. Nyborg Lars from Charles Industrial College in Gothenburg of Sweden. GAN Yong, Academician of the Chinese Academy of Engineering and President of Central Iron and Steel Research Institute was Chairman of the organizing committee. At the seminar, extensive exchange and discussion were carried out with regards to the fields of composite material, biological material, high performance metal structure material, high performance ceramics, nanometer material and powder metallurgic material.

The Sino-Sweden bilateral seminar on new materials was aimed at providing the exchange and

co-operation platform for the research institutions, universities, industry circles, technological intermediary service agencies and governmental departments of the two countries. Since the first seminar held in Charles Industrial College in Gothenburg in 2001, both sides have carried out frequent exchange through personnel, information and data by the principles of equality and mutual benefit, which narrowed the gap between our country and advanced countries in the research on such new materials as titanium nickel and titanium platinum and also expanded the development platform for research findings in the field of new material. It is learnt that the new material cooperation and exchange center established by both sides has already become channel of communication among the material development and research institutions of both countries and the bridge for seeking new cooperation opportunities. This center has also helped to bring about a number of technological cooperation projects such as Ti-Al metal chemical compound and metal ceramics composite material. This is favorable to promoting the development of new materials in our country.

World scientific leaders congratulate 50th founding anniversary of CASAD
(CAS, 2005-06-06)

Congratulations have poured in from the world scientific community on the occasion of the 50th anniversary of the establishment of the Academic Divisions of CAS (CASAD).

Recently CAS President Lu Yongxiang has received congratulation messages from leaders of scientific organizations across the world, including President of the Australian Academy of Sciences Jim Peacock, President of the French Academy of Sciences Edouard Brezin, President of the Max Planck Society Peter Gruss, President of the UK Royal Society Robert M. May, President of the Japan Academy Saburo Nagakura, President of the US National Academy of Sciences Bruce Alberts, and President of the Russian Academy of Sciences Yuri S. Osipov.

It is inspiring to reflect on the progress made in China on science and technology over the past century, says Prof. Bruce Alberts. All of the science academies of the world have collectively benefited from an increasingly strong partnership with CAS, Alberts stresses.

Prof. Peter Gruss congratulates his Chinese counterpart on the achievements CASAD have scored over the past 50 years, asserting that by setting up the Academic Divisions, an important condition for the safeguarding of scientific excellence has been created. "Each individual ¨C carefully selected ¨C Academic Members guarantees the advancement and preservation of the common fundamental principles of the international knowledge community, namely the openness and universality of science."

Marked progress has been achieved since the conclusion of the S&T cooperation agreement between the Russian Academy of Sciences (RAS) and CAS signed in 1992. This cooperation is mutual beneficial, notes Prof. Yuri S. Osipov.

On his part, Prof. Edouard Brezin points out that it is clear for the entire scientific community in the world that the success in science and technology in China, especially during the recent years, have been considerable.

In Canberra, Prof. Jim Peacock says that over the past 50 years, CASAD has established collaborations and linkages with academies of sciences in numerous countries, and have assisted greatly in promoting scientific and technological cooperation and exchanges with other countries, including the Australian Academy of Sciences.

As close neighbors separated only by a strip of water, Japan Academy will strengthen academic

exchanges with CASAD, making contributions to the friendship of the two countries, says Prof. Saburo Nagakura.

Lord Robert M. May voiced his confidence that the next 50 years will be even more exciting for CAS and its Academic Divisions, saying he believes that CAS will continue to play a critical role in the continued growth and development of Chinese science and technology.

China-UK Innovation Park founded in Cambridge

(MOST, 2005-06-11)

China-UK Innovation Park, a joint-stock utility founded by 6 Guangzhou-based enterprises, formally hung out its shingle at St. John's Innovation Center in Cambridge, UK on May 31. LIN Yuanhe, Executive Vice Mayor of Guangzhou, noted that China-UK Innovation Park was an important carrier and would set up a common platform to facilitate mutual understanding and exchange between China and UK and provide more opportunities of cooperation and larger space of development for both sides.

St. John's Innovation Center, located in East of England, one of the fast-growing regions in the UK hosting 7 world-class universities with Cambridge University as its R&D Center, is widely recognized as a global S&T research center of great significance. Thanks to its dynamic innovation capabilities and conglomeratic innovation achievements, a large number of world-known multinationals including Microsoft, Sony, Intel and Nokia have been attracted to carry out R&D, manufacturing, testing and marketing operations in this area.

Since Guangzhou is right now in the progress of economic restructuring to upgrade and renew its products, develop the hi-tech industry and reform its traditional industries, stronger international cooperation has been considered as one of its key strategies by Guangzhou. The joint-stock China-UK Innovation Park founded by 6 Guangzhou enterprises will not only reinforce the S&T exchange and cooperation between the two regions and the two countries, but will also extend the fields of cooperation to aviation, port and service industries. This platform will facilitate the optimization of resource combination and configuration, thus benefiting the economic development of both regions.

China-UK Innovation Park, a joint effort by both the Chinese and the British governments, aims to help more Chinese small and medium-sized enterprises seeking development in UK and Europe to promote their R&D competence, management and competitiveness and expand their share on the global market and introduce advanced technologies and management practices into China, said WANG Baoqing, Minister-Counselor for Science and Technology at the Chinese Embassy to UK.

In order to facilitate the fast growth of Chinese economy and help small and medium-sized enterprises with value-added products entering the overseas arena, MOST has founded 5 S&T Start-up Parks respectively in the U.K., the U.S., Russia and Singapore since 2002.

INTEROP Project Advisor visited MOST High Tech R&D Center

(MOST, 2005-06-16)

A few days ago, ZHAO Yuhai, Director-General of the High Tech Research and Development Center of MOST met in Beijing with a delegation of four led by Professor Doumeingts, Advisor for INTEROP (Interoperability Research for Networked Enterprises Applications and Software) under the EU Sixth Framework Program. Professor YANG Haicheng, Head of the expert team for modern integrated manufacturing system technology project in 863 Program was present at the

meeting.

Director-General ZHAO briefed the guests on the background of the High Tech Research and Development Center and the 863 Program. Professor Doumeingts made an introduction to the INTEROP project. The INTEROP project is an NE (Network of Excellence) project under the EU Sixth Framework Framework. More than 200 research personnel from 50 organizations of 15 countries including 13 EU member countries participated in this project. These research personnel were representatives from companies, universities, research institutes and public service agencies. The gross project budget is 12 million Euros with 6.5 million Euros from EU. The objective of this project is to provide strong backing to EU enterprises in the interoperability research for networked enterprises applications and software and form a virtual research group of sustainable development. Director-General ZHAO showed strong interest in the organizational mode of such projects and held extensive exchange with the delegation.

Professor YANG Haicheng briefed the guests on research project concerning the modern integrated manufacturing system in the 863 Program and discussed about orientation and contents for joint study.

Sino-Belgium Seminar on Education, Science and Technology convened in Beijing (MOST, 2005-06-16)

On June 6-7, 2005, "Sino-Belgium Seminar on Education, Science and Technology" was held in Diaoyutai State Guesthouse. H. R. H. King Albert II of Belgium was present at the closing ceremony and delivered a speech, in which the King pointed out that science and technology, education and culture were important constituents of Sino-Belgium relationship. As the representative on the Chinese side, SHANG Yong, Vice Minister of Science and Technology made the summary speech at the Seminar and briefed the King on the result of the two-day seminar and the development of education, science and technology undertakings in China. After the Seminar, H. R. H. King Albert II and Vice Minister SHANG Yong attended the Belgian Agfa Bus donation ceremony.

At the Seminar, the two countries exchanged the development of science and technology, education and social science research of China and Belgium and bilateral cooperation. More than 50 Chinese university presidents and scientists held group discussions with the Belgian counterparts on the cooperation projects and research topics of mutual interest.

This Seminar was undertaken by MOST and Ministry of Education of China and the Belgian Embassy to China on the occasion of the state visit by H. R. H. King Albert II and H. R. H. Queen Paola to China. The visiting delegation of the Belgian King included presidents of well-known Belgian universities and famous scientists (from the sectors of space, nuclear energy, medicine, animal husbandry, microbiology, superconductor, nanometer, meterology and geography) as well as Sinologists.

In addition, the Belgian scientists were divided into two groups for a field visit to corresponding sectors. Astronauts of European Space Agency and Belgian space medicine experts visited China Institute for Aerospace Medical Engineering and had a dialogue with Chinese astronaut YANG Liwei. Belgian scientists of nanometer and superconductor visited the National Center for Nanoscience and Technology, Chinese Academy of Sciences.

Sino-French teamwork pays off in research of glossy ganoderma
(CAS, 2005-06-29)

A Sino-French research team recently reported its advances in revealing the immunity-enhancing efficacy of glossy ganoderma, a medical herb in China.

Glossy ganoderma (*Ganoderma lucidum*) or lingzi in Chinese, is one of most precious herbal drugs catalogued in Chinese pharmacopoeia for its function of building up human resistance to diseases. Although modern medicine has proved its positive role in support of the human's immune system, an overall understanding of its pharmaceutical mechanism is still unavailable.

In order to make a better understanding of the herb, scientists from the CAS Nanjing Branch, Nanjing Zhongke Group and Cible Moleculaires en Cancerologie of the Universite Paris 7 have joined hands in conducting research since 2003.

After nearly three years of work, the researchers have achieved encouraging progress. They have discovered that the products derived from the herb have a function of inhibiting angiogenesis and capable of promoting the cell growth. A sample with 10mg/cc in concentration, for instance, presents a remarkable effect in promoting the cellular growth in endothelial vessels. Another significant result is the cell's growth in favorable response to the cultivation without external stress. In an ideal condition of concentration, the herb can impair the passive role of the stress on the tissue culture. In addition, some pathological effects of the herb's medications in the process of cell division are discovered. The most exciting discovery is their inhibiting efficacy in suppressing familial herpes and even the HIV. This is an unprecedented discovery never reported at home and abroad.

In the past, the ganoderma research used to be concentrated in Asian countries, such as China, Japan and the ROK. The cooperation in Nanjing is the first attempt in this regard ever established between East and West. The move is regarded as beneficial to the traditional Chinese medicine when making its way into the international arena. It is also conducive to the accelerated commercialization of the research results as a hi-tech enterprise takes part in the teamwork.

"Belarus S&T Day" held in Changchun
(MOST, 2005-06-30)

In accordance with the Protocol of the 6th Regular Meeting of the Sino-Belarus S&T Cooperation Committee, "Belarus S&T Day" was held in Changchun, Jilin Province from June 16 to 18, 2005. This activity was sponsored jointly by MOST, State Science and Technology Committee of Belarus, Provincial Government of Jilin and Municipal Government of Changchun, and undertaken by the Department of Science and Technology of Jilin Province and the Bureau of Science and Technology of Changchun City. A Belarus governmental delegation led by the First Vice Premier attended the opening ceremony. LIU Yanhua, Vice Minister of MOST and WANG

Min, Governor of Jilin Province and other relevant leaders attended the ribbon-cutting ceremony, and presented at the Belarus S&T Exhibition and S&T Result Fair.

The members on the Belarus S&T delegation came from 36 research institutes under Belarus National Academy of Sciences, Ministry of Education, and Ministry of Industry. Their exhibition covers 16 sectors such as optical technology, microelectronics, machinery manufacturing, new materials, ecological agriculture, biological medicine, information technology and energy. Letters of Intent for Cooperation have been inked among many research institutes and universities of the two countries, further advancing the mutual understanding and cooperation between the S&T and industrial circles of China and those of Belarus.

During the activity, S&T cooperation agreements have been signed respectively between the Jilin Provincial Government and the State Science and Technology Committee of Belarus, between the China Science and Technology Exchange Center and the Technology Transfer Center of Belarus, between the China Northeast Agricultural S&T Innovation Center and the Belarus National Academy of Sciences. At the same time, three specialized technological fora of "Agriculture and Agricultural Machinery Manufacturing", "Micro-electronics and Photoelectric Technology" and "Laser and Laser Technology" were conducted during the S&T Day, which strengthened the exchange and interaction among the S&T personnel of both sides.

This "Belarus S&T Day" is an important exchange activity for science, technology and economy. It is also an important activity for attracting investment in S&T for the revitalization of the old industrial base in the Northeast. This activity will further advance the mutually beneficial and win-win S&T cooperation between China and Belarus towards a continuous development of wider sphere, greater scope and higher domain.

5 Miscellaneous

Nobel laureates tap on population, traffic

(China Daily, 2005-06-02)

Nobel laureates and the Beijing mayor addressed issues as diverse as the optimum population figure for the capital, traffic congestion and inheritance tax on the last day of an historic forum.

Beijing is under great population pressure, Mayor Wang Qishan told four economics winners at the Nobel Laureates Beijing Forum. The three-day gathering of seven Nobel laureates and five other distinguished economists ended yesterday.

"The ideal population figure for Beijing in 2020 is 18 million, according to the urban layout for the capital city which was approved by the State Council earlier this year," Wang said during a dialogue between the laureates and senior Beijing municipal officials.

In total, the permanent population figure - including those who have lived in Beijing for at least six months is 14.97 million, according to the mayor. If recent arrivals are taken into account, the figure would be nearly 17 million, he said.

Robert A. Mundell, a winner in 1999, responded: "Big cities will face big problems, with for example, water supply and pollution."

James Mirrlees, who won the Nobel in 1996, said it is difficult to come up with a reasonable figure for the right population size in 2020.

As the discussion veered to increasing traffic in the city, Vernon L. Smith, the 2002 winner, raised the possibility of using a pricing system for road usage to ease congestion.

The Beijing mayor also said that the Chinese mainland will not collect inheritance tax soon. Wang, who in 2001 was involved in high-level discussions on the subject, said yesterday there were some barriers to collect such a tax on the Chinese mainland.

"First, the personal income of some Chinese is not transparent enough," he said.

"The second is the unique Chinese culture parents may buy a house for children soon after they are born."

Whether a house should be included while calculating personal property is also a problem, the mayor said.

Earlier, while addressing a group of experts with the Development Research Centre of the State Council late Tuesday, Mundell urged China not to retaliate against Europe and the United States' restriction imports of some Chinese textile goods.

Mundell, father of Euro and an advocate of a stable Chinese currency, said the best policy for China is to express disappointment and maybe concerns about the (US and European) policy, which he described as offensive to the rule of the World Trade Organization (WTO).

"It doesn't fit into the WTO rule, and it's illegal. They are doing a bad thing," said Mundell.

He said the recent restrictions is going to require a big adjustment in China, and it would have negative impact on employment in some areas in China.

Overseas students visit Zhongguancun

(People's Daily, 2005-06-04)

Nearly 100 Chinese students who study overseas recently paid a visit to the Zhongguancun Science Park in Beijing, hoping to find opportunity for development. This is the 92nd overseas

student group the park has received since 2000.

Having visited Zhongguancun Software Park, Life Science Park, and Culture Square etc. and listened to related introduction, the students had a better understanding as to great changes in the Science Park and its services for overseas students.

The overseas students said the Science Park's perfect environment for starting business, favorable policies, especially its strong support and high-quality services to returned overseas students have deeply impressed them.

Chinese physicists mark World Year of Physics

(Xinhua Net, 2005-06-04)

Noted Chinese physicists gathered Friday at Qinghua University, one of China's leading universities, to mark the World Year of Physics.

Recalling the history of Chinese physics development, Chen Jia' er, former president of China Physics Society and academician of China Academy of Sciences, said that physics has played an important role in the scientific development of China before the 16th century.

"Although the development of China's contemporary physics lagged more than 200 years behind the world, it has achieved world- renowned progresses since the People's Republic of China was founded in 1949, including the successful tests of atomic bombs and neutron bombs," he said.

Physics in the 20th century brought the world four technical theories of nuclear reactions, semiconductors, lasers and superconductors. It will still be the foundation of natural sciences in the future, said Lu Yongxiang, president of the Chinese Academy of Sciences.

Innovation is necessary to the development of sciences in modern society. The nation should provide a better environment for physics in terms of attention, support, admiration and education, said Feng Changgen, an official with the China Association for Science and Technology.

"We must try to get more understanding and support to China's physics from the public by marking the World Year of Physics," he said.

In 1905, the 26-year-old Albert Einstein published five ground- breaking papers on relativity and quantum mechanics, which greatly advanced physics research around the world. The year of 1905 was thus called the miracle year of Einstein.

The United Nations General Assembly adopted a proposal to name 2005 as the World Year of Physics.

News release on CHINAOCS 2005 held in Beijing

(MOST, 2005-06-06)

On the morning of May 17, the organizing committee for CHINAOCS 2005 held a news release in the Great Hall of the People in Beijing, proclaiming the opening of CHINAOCS 2005 in Dalian from 22 to 24 June. Leaders from MOST, Ministry of Education and Ministry of Personnel and TENG Weiping, Vice Provincial Governor of Liaoning and DAI Yulin, Vice Mayor of Dalian attended and addressed the news briefing respectively. Relevant leaders from the Overseas Chinese Affairs Office of the State Council of PRC and the Chinese Academy of Sciences were also present at the briefing. ZHAO Mingpeng, Director-General of the Department of Science and Technology of Liaoning chaired the news briefing. Reporters of major news media in Beijing and Liaoning were invited to the news release.

The theme of CHINAOCS 2005 is "Boosting International S&T Cooperation and Exchange and

Attracting Chinese Scholars Returning from Overseas". On the occasion, about a thousand overseas students from all countries and regions of the world and thousands of high-level talents both domestic and foreign inside the country as well as over 5,000 representatives from domestic enterprises, universities, scientific research institutions and the government will participate in associated events of CHINAOCS 2005.

The main activities include "two conferences, one exhibition and 3 forums", i.e. conference on the interface of overseas students to high and new technology projects; international top-level talent exchange conference; exhibition on international innovation technology and product; high-level forum on international technological innovation, overseas students forum and forum on international investment.

The news release of CHINAOCS 2005 is to put up the best platform for overseas students to come back to the motherland for establishing businesses and serving the country.

Shanghai-style Maglev train may fly on London line

(China Daily, 2005-06-07)

Described as "flying on the ground," Shanghai's 270mph magnetic floating railway has impressed British ministers.

Known as the Maglev (magnetic levitation) train, China's flagship transport system takes 8 minutes to hurtle the 30 kilometres from Shanghai airport to the city's outskirts - a journey which takes up to an hour by car.

A magnetic charge lifts the train's sleek white carriages, first of their kind in the world, one centimetre above the track.

British Prime Minister Tony Blair has held a seminar to consider building a Maglev route along the spine of Britain through Birmingham, Manchester, Leeds, Newcastle and Edinburgh.The project would pay huge environmental dividends making domestic air travel virtually obsolete.

Finance minister, Gordon Brown, rode Shanghai's Maglev in February.

The German company behind Shanghai's Maglev, Transrapid International, has spent 18 months on a "pre-feasibility" plan which reckons on a basic cost of GBP20 million (US$37 million) a kilometre. The entire 800-km route would cost GBP16 billion (about US$29 billion) even before taking into account land purchase.

Jochen Kruse, Transrapid's project manager in Shanghai, said: "We've had discussions with Mr Blair's office - now we'll be going to the Department for Transport." He said Britain's hilly terrain was ideal for the Maglev, which can be angled at a gradient of up to 10 per cent.

The Shanghai system has been open for 18 months and has carried more than 2 million people. But critics question the durability of the technology - one of the two tracks has been shut for long periods while engineers adjust cables which spark the train's magnetism.

Furthermore, the entire system is sinking into the Pudong, Shanghai's marshy outpost of land used as an economic boom zone.

The Chinese Government is considering an extension into the city and possibly to the neighbouring city of Hangzhou in time for Shanghai's hosting of the World Expo in 2010.

The Maglev is attracting followers around the world: Germany wants one for an airport link in Munich. The US Government is to choose between three Maglev schemes: a Baltimore to Washington railway, an airport link in Pittsburgh or a 50km track through the Nevada desert linking Las Vegas with casinos on the Californian border, which could be extended to Los

Angeles.

Mr Kruse said a green light from Mr Blair would enable Transrapid to come up with a detailed scheme in 18 months. But construction could take many years: "How long does it typically take to build such things in England? If you could import a thousand Chinese workers, it could be built in a year."

China to build coal bed gas engineering research center

(Xinhua Net, 2005-06-14)

China will speed up building the national research center on coal bed gas engineering by issuing treasury bonds on coal mine safety, according to the State Development and Reform Commission (SDRC).

The research center should place the stress on solving key technical problems and handling the relationship between gas explosion control and utilization, said Zhang Guobao, SDRC vice minister, at the second meeting held recently by the ministerial office for coal mine gas prevention and control.

Since the office was established, 11 expert teams have been sent to 45 major enterprises to conduct safety assessments. The notice for raising standards of coal mine safety production fee has been issued, and the first treasury bonds funds of 50.2 million yuan (6.06 million US dollars) for coal mine safety improvement have been appropriated for the establishment of gas monitoring system in 104 coal mines of the country.

The present tasks include speeding up the establishment of the coal bed gas engineering research center and the establishment of coal mine gas prevention and control information system and enhancing investigation and research of coal mine gas control and utilization, Zhang said.

This year, China will invest 15 billion yuan (1.81 billion US dollars) in technological upgrading of coal mine safety system, which will be basically completed in upcoming two or three years.

Established last March, the ministerial office for coal mine gas prevention and control was made up of 12 departments including the SDRC, the General Administration of Work Safety (GAWS) and the ministries of Science and Technology, finance, labor and social security and land and resources.

China's foreign trade of high-tech products increases

(CRI, 2005-06-14)

China has reported increases in both import and export of high-tech products in the first five months of 2005.

Statistics from the Ministry of Commerce show China imported and exported 146 billion US dollars of high-tech products, up 26 percent from the previous year.

The high-tech products has accounted for more than a quarter of the country's overall foreign trade during the period.

CAS researcher calls on legislation of protected areas

(CAS, 2005-06-16)

China should draft a broad, framework law on protected areas, under which specific legislations should be included, says a CAS researcher.

Currently the legislation on nature reserve is in the pipeline. The law will be drafted by the Environment and Resource Committee of the National People's Congress (NPC) and then submitted to NPC Standing Committee for approval. To make preparations, an international symposium on research and investigation for the legislation on natural reserve in China was held recently in Beijing.

At the symposium, Dr. Xie Yan, a zoologist from the CAS Institute of Zoology, gave a report on the protected area categories in China, focusing on some research results and suggestions from a task force of the China Council for International Cooperation on Environment and Development.

According to her, the category of protected areas in China should include nature reserves, scenic landscape, forest parks, sites of natural heritages, geological parks and wetland sanctuaries etc. At present the natural areas that need to be protected in China are managed by multiple administrations. The multiple-management situation has its reasons, but meanwhile lots of problems.

Dr. Xie singled out the lack of a comprehensive management system for various protected areas in China as a root-cause for an insufficient play of their potentials in promoting the local economies. She suggests that China's classified system should be built up based on the concept framework suggested by the World Conservation Union.

Dr. Xie urged to establish a comprehensive legal framework for an advanced system of protected areas based on the full range of protected-area objectives, under which more specific legislation, including the nature reserve law currently under preparation and regulations on other types of protected areas should be included. The law should specify legal procedures and criteria for establishment of various categories of protected areas, based on their management objectives, supervision and evaluation mechanisms, methods of funding, and participation of local communities and the wider public, she added.

China to embark on path of "green rise"

(Xinhua Net, 2005-06-19)

A senior Chinese official in charge of environmental protection Saturday warned that environmental crisis coupled with many social problems will come earlier than expected if the country fails to embark on a path of "green rise" immediately.

Pan Yue, deputy director of the State Environmental Protection Administration (SEPA), said at the Seventh Green China Forum, which started here Saturday, that although China has become the

biggest manufacturer in the world after experiencing rapid economic development over the past 20 years, it "has paid a high environmental price".

The forum has attracted more than 200 governmental officials, experts and business people to discuss ways to sustainably develop the country.

Pan said that serious pollution is occurring in a China with a per capita GDP lingering between 400 and 1000 US dollars, whereas it emerged in western countries when the per capita GDP was 3,000 to 10,000 dollars.

"The pollution load of China will quadruple in 2020 when the country's GDP quadruples if the pace of pollution remains unchanged." By then, China will only have six out of the current 45 major mineral resources, Pan said.

China ranks first in daily water consumption and sewage discharge, and second in energy consumption and carbon dioxide discharge. Its energy consumption is seven times that of Japan, six times that of the United States and 2.8 times that of India interms of unit GDP.

China currently has a population of 1.3 billion, compared to the 600 million it had when New China was founded in 1949. But land suitable for people to live has shrunk from six million square kilometers to the current three million square kilometers due to serious soil erosion.

Pan added that people should not be happy about China being called "the World Factory" like we were several years ago, since China only makes "low grade industrial products" for the developed countries "by using our own resources".

Pan criticized the view of developing first and preventing and controlling pollution later, saying it is "absolutely wrong".

Pan urged that China should embark on the path of a "green rise" to calmly face the "green barrier" erected by the developed countries and pledged that China will honor all signed international pacts on environmental protection like the Kyoto protocol.

Wireless search engine CGOGO to enter Chinese market

(People's Daily, 2005-06-23)

Wireless search engine CGOGO will enter the Chinese market at the end of June 2005.

As world's first wireless search engine, CGOGO features perfect combination of wireless search technology and cell phone. Users will enjoy personalized search service without adding any peripheral equipment and cell phone software.

At present CGOGO offers products including Internet search, news search, free download of pictures and rings for cell phone, etc.

As combination of Internet search technology and mobile communication technology, the wireless search technology has been regarded one with bright future a couple of years ago.

China's home-grown standard able to support 3G service

(Xinhua Net, 2005-06-24)

China's home-grown standard for third-generation mobile phones (3G) would be ready for commercial use as scheduled and the technology is able to support multimedia services, said sources close to the technology Thursday.

Reports had said China's test on its TD-SCDMA standard scheduled to end by June 30 would be delayed for one or two weeks due to technology immaturity and phones equipped with the standard could only be used to make phone calls or send text messages.

"The network test on TD-SCDMA is going on smoothly and the technology goals are being realized step by step as scheduled," said Yang Hua, secretary-general of TD-SCDMA Industry Alliance.

Six major 3G system equipment providers including Datang Mobile, TD Tech, ZTE, Putian, ASB and Nortel, have developed four sets of system equipment and participated the network test.

"These products have realized the expected functions and performed quite well in the test," said Yang.

The system equipment on TD-SCDMA standard are ready for commercialization, Yang said.

The test shows that chips on TD-SCDMA standard could support digital service at the speed of 384 kb per second which allows video phone calls and downloading video clips, said Yang.

China would be able to produce chips ready for commercial use in the third quarter and terminals would be ready for commercial use by the end of this year, Yang said.

Handsets equipped with TD-SCDMA standard would be produced in large scale early next year, he said.

China, which has the world's biggest mobile phone market with 358 million users, has been pushing for development of its 3G standard.

TD-SCDMA is one of the three international 3G standards with China owning its intellectual property rights. China has finished two tests on 3G before. The third round of test on TD-SCDMA alone was launched in last December.

China's home-grown standard able to support 3G service.

Establishment of Haidian Science Park Incubator Community
(MOST, 2005-06-24)

(Symbol)

Recently, the inaugural ceremony for Haidian Science Park Incubator Community of Zhongguancun Science Park was held in the Overseas Students Garden of Haidian Park.

Initiated by the Management Committee of Haidian Science Park, the Haidian Science Park Incubator Community is an enterprise incubator platform made up of ten incubators under Tsinghua University, Beijing University, Beihang University and Haidian Enterprise Center. Its purpose is to develop the network for incubation services, transfer single incubator enterprise service into multiple-incubator service, so as to integrate incubation service resources and upgrade

incubation service. This community will become a platform of communication between the government and incubators, a platform of reform and innovation for incubators and a platform for studying, developing and extending of the business.

Relevant officials from the Torch High Tech Industrial Development Center of MOST, Beijing Science and Technology Commission and the Management Committee of Zhongguancun Science Park delivered speeches at the inaugural ceremony and put forward ardent expectations for the establishment and development of the enterprise incubation community.

China to host the 6th International Symposium on Sturgeon in 2009
(CAS, 2005-06-27)

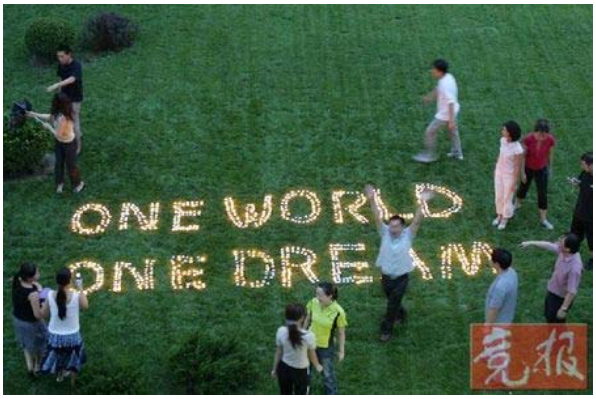
Initiated by Prof. Chang Jianbo from the CAS Institute of Hydrobiology and Prof. Wei Qiwei from the Yangtze River Fisheries Research Institute, a proposal to host the 6th International Symposium on Sturgeon in Wuhan, capital city of central China's Hubei Province, in 2009 was preferred by the academic committee at the 5th International Symposium on Sturgeon.

Regarded as a living fossil with a history of more than 250 million years, sturgeon are highly valued in evolutionary research. But due to recent years of excessive fishing, irrational irrigation constructions and water pollution, they are under a dire threat and several rare and precious species have already died out.

In order to save sturgeon, the World Sturgeon Conservation Society was established in 2003 in Germany, and a decision was made to hold an international symposium on sturgeon every four years.

The fifth such symposium took place in Ramsar, Iran from May 8 to 13. The conference was attended by some 400 delegates from the many countries across the world, among 12 were from China. Ten Chinese scientists were invited to make presentations at the plenary sessions of the meeting, covering subjects ranging from artificial reproduction to molecular marker.

Official interpretation of the slogan of the 2008 Beijing Olympic Games
(China Daily, 2005-06-27)



"One World One Dream" fully reflects the essence and the universal values of the Olympic spirit - Unity, Friendship, Progress, Harmony, Participation and Dream. It expresses the common wishes of people all over the world, inspired by the Olympic ideals, to strive for a bright future of mankind. In spite of the differences of colour, language and race, we share the charm and joy of the Olympic Games, and together we seek the ideal of mankind for peace. We belong to the same world and we share the same aspirations and dreams.

"One World One Dream" is a profound manifestation of the core concepts of the Beijing Olympic Games. It reflects the values of harmony connoted in the concept of "People's Olympics", the core and soul of the three concepts - "Green Olympics, High-Tech Olympics and People's Olympics". This pursuit of harmony, be it between man and nature, among peoples, within society and in development, are long cherished dreams of ours. It is our belief that peace and progress, harmonious development, living in amity, co-operation and mutual benefit, and enjoying a happy life are the common aspirations of people throughout the world.

"One World, One Dream" is simple in expressions, but profound in meaning. It is of China, and also of the world. It conveys the lofty ideal of the people in Beijing as well as in China to share in a global community and civilization and to create a bright future, hand in hand with the people from the rest of the world. It expresses the firm belief of a great nation, with a long history of 5,000 years and on its way towards modernization, that is committed to peaceful development, a harmonious society and people's happiness. It voices the aspirations of 1.3 billion Chinese people to contribute to the establishment of a peaceful and bright world.

The English translation of the slogan is distinctive in sentence structure. The two "one"s are perfectly used in parallel, and the words "World"and "Dream" form a good match. The slogan is simple, meaningful, inspiring, and easy to remember, read and spread.

In Chinese, the word "tongyi", which means "the same", is used for the English word "One". It highlights the theme that "all Mankind lives in the same world and seeks for the same dream and ideal".

6 Information for Coming Workshops in August

The 7th International Conference on Electronic Measurement and Instrument
Date: August 06
City: Beijing
For more information, please contact Helmholtz Beijing Office.
info@helmholtz.cn

International Conference on Finite or Infinite Dimensional Complex Analysis and Applications
Date: August 08 – August 12
City: Shantou, Guangdong Province
http://www.sci.stu.edu.cn/xuexi/math/icfidcaa/index.asp

The Satellite Meeting of 40th IUPAC Congress
The International Symposium on Physical Chemistry: Education and Challenge
Date: August 09 – August 11
City: Xi'an, Shan'Xi Province
http://www.pcec2005.org/welcome.asp

International Workshop on Stem Cells
Date: August 15 – August 18
City: Beijing
Contact: meeting@sinocells.com

The 8th Biennial SGA (Society for Geology Applied to Mineral Deposits) Meeting
Date: August 18 – August 21
City: Beijing
http://www.sga2005.com/english.htm

The 20th Congress of the International Commission for Optics
Date: August 21 – August 26
City: Changchun, Jilin Province
http://www.conference.ac.cn/ico20.html

The 4th INTERNATIONAL SYMPOSIUM ON SPATIAL DATA QUALITY
Date: August 25 – August 26
City: Beijing
http://www.lsgi.polyu.edu.hk/issdq2005/

The conference WCU(World Congress on Ultrasonics)/UI(Ultrasonics International)' 05
Date: August 29 – September 01
City: Beijing
Contact: wcu-ui-05@mail.ioa.ac.cn

Satellite Symposium of IEEE EMBS 27th annual conference 2005: Frontiers of Neural Engineering
Date: August 30 – September 31
City: Beijing
http://162.129.29.115/embs/

Abbreviations

CAS - Chinese Academy of Sciences
MOST - Ministry of Science and Technology
CRI - China Radio International
CCTV - China Central Television