



Science, Technology and Education News from China

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Introduction



金牛献瑞，恭喜发财！ Happy Year of the Ox!

Chinese leaders remain committed to invest heavily in science and innovation. China's input into S&T has hit a record high in 2008. The strategic changes announced by the Chinese Academy of Sciences underline that S&T innovation will be equally important for the future of China as technology transfer. The economic slowdown is beginning to show its impact in the field of higher education: The growing unemployment rate in China forced graduates to seek temporary haven in further studies, and some went abroad, evidenced by the increases of the number of students going to the US which soared up nearly 20% in 2008.

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Policies

According to recent figures published by the People's Daily, **China's input into science and technology has hit a record high in 2008**. The total investment stood at **371 billion yuan**, accounting for **1.49% of China's GDP**. The central government has injected about 100 billion yuan, while local governments have invested about 80 billion yuan. The remaining investments were from enterprises and other sectors of society. It will be interesting to see whether the financial and economic crisis will have an impact on these investments during 2009. Premier Wen Jiabao said on Sunday 11 January 2009 that China should move forward some 600 billion yuan (\$88 billion) in planned spending on science and technology investments to help the country achieve a faster rebound from the global financial crisis.

At the same time, the **Chinese Academy of Sciences, the leading Chinese research institution, has announced several changes in science administration**. According to CAS President LU Yongxiang, CAS has to realize nine transitions under the guidance of the scientific outlook on development.

“First of all, a change should be made in the research mode, **from isolated, free exploration to innovation activities** focusing on goal-oriented fundamental and cutting-edge research, key high-tech development, major systems integration, and systematic and basic studies concerning sustainable development. These activities should be performed in light of key S&T issues in the world and the major strategic demands of the country.

Second, a **transition should be made in science evaluation**, from the conventional practice laying stress only on research papers and awards to new approaches also giving importance to innovative contributions and innovation levels, qualities and development trends. On the basis of peer review, evaluation should be more concerned with the contributions of research work to practice and whether it can withstand the test of time.

Third, a transition should be made from a one-sided emphasis on S&T innovation to an equal stress on both **innovation and technology transfer**.

Furthermore, in order to optimize personnel structure and upgrade the S&T contingent, a change should be made in **human resource management**, from paying attention to individual talent recruitment to laying emphasis on the selective introduction and cultivation of professionals according to development requirements.

Fifth, **the way that basic research units are organized should be transformed from the traditional ones led by principal investigators to novel ones adaptable to various research activities**, ranging from free exploration, large science projects, high-tech frontier research, key technology development, major systems integration and innovation to the long-term systematic buildup of data and their testing, and technology transfer.

Sixth, conversion should be made in organizational management from a system that is mainly composed of research institutes established according to academic disciplines to a new one featuring a matrix grid and composed of both **research institutes and innovation clusters** formed in light of major strategic objectives of innovation.

Seventh, **expectations of scientific research should change from primarily stressing S&T outputs to giving equal importance to human resource development and education reform**, plus innovation environment upgrading and management innovation, so as to produce first-class research, management, academic environment and personnel.

Eighth, the **existing distribution of CAS institutes across the country has to be reshaped** according to the needs of national socioeconomic growth and regional development, as well as to native natural resources and environment.

Finally, **the financial resources of CAS should be diversified**. In addition to stable support from the central government, efforts should be made to explore other sources from various sectors, including local authorities, business enterprises and overseas organizations.”

Related news:

[Scientists Urge More Attention on Scientific Integrity](#)



News

1. Top 10 Chinese S & T Breakthroughs Selected by CAS Academicians

(CAS, 22-01-2009)

- (1) Launch of Shenzhou-7 and the first time Chinese astronauts performed spacewalk
- (2) Breakthrough in the research and industrialization of China's Next Generation Internet (CNGI)
- (3) Beijing-Tianjin CRH (China Railway High-speed) put into service
- (4) The diploid genome sequence of the Asian people
- (5) The Beijing electron-positron collider and its second phase construction (BEPC II) completed
- (6) The Dawning 5000A supercomputer among the top 10 of the world's most powerful supercomputers
- (7) The large Sky Area Multi-Object Fibre Spectroscopic Telescope (LAMOST) installed in National Astronomical Observatories
- (8) China ARJ-21 Jet's Successful Trial Flight
- (9) The first experimental realization of "quantum repeater"
- (10) Bt-transgenic cotton alleviates insect damage

2. China, Germany Agree on Maglev Technology Transfer

(Xinhua, 29-01-2009)



China and Germany on Thursday 29 January 2009 signed a memorandum of understanding on the transfer of parts of the core technologies from Germany for the maglev railway projects in China. Cooperation between China and Germany, both export-driving nations, is of special significance amid the ongoing financial and economic crisis, said a joint statement by the two leaders.

3. China, Japan and S Korea Set up World's Largest Radio Telescope Array

(People's Daily, 01-02-2009)

Scientists from China, Japan and South Korea have just started using the world's largest radio telescope array, which they have jointly set up to probe into the mysteries of outer space, including the structure of the Milky Way Galaxy and super massive black holes. The major role of the East Asia VLBI observation network is to improve the image of the Milky Way Galaxy that is being mapped by Japan's radio astrometry observation program. Korean and Japanese scientists are developing a special computer for integrating mass observation data. It is planned for this computing facility to be put into operation in Seoul, South Korea, by the end of the next year. Scientists expect that the East Asia VLBI observation program will be fully launched by 2010.

4. China to Have Independent Global Satellite Navigation System

(CRI, 20-01-2009)

China plans to complete its independent global satellite navigation system by launching about 30 more orbiters before 2015. The system will shake off the dependence on foreign systems, said Zhang Xiaojin, director of astronautics department with China Aerospace Science and Technology Corporation (CASC). China launched the first satellite, Beidou Navigation System, into geostationary orbit in Oct. 2000, in an effort to build up its own positioning system independent from the U.S.'s Global Positioning System (GPS), E.U.'s Galileo Positioning System and Russia's Global Navigation Satellite System (GLONASS).



5. NSFC Delegation Visited the Bioversity International

(NSFC, 13-01-2009)

On 13 November, 2008, a NSFC delegation led by Prof. Wang Jie, Vice President NSFC, paid a visit to the Bioversity International in Italy, which is one of the 15 centres under the Consultative Group on International Agriculture Research (CGIAR). Dr. Emile Frison, Director General of the Bioversity International, warmly received the first NSFC delegation. Prof. Wang praised highly the role of CGIAR in agricultural research for the whole world and its contribution to Chinese agricultural development. He also expressed the wish to strengthen the cooperation with the centres of CGIAR including the Bioversity International. The meeting was chaired by Dr. Kwesi Atta-Krah, Deputy Director General of the Centre. Prof. Chang Qing, Deputy Director General of NSFC Bureau of International Cooperation, briefed about NSFC and its priorities on biodiversity research, as well as the cooperative mechanisms with International Maize and Wheat Improvement Centre (CMMYT), and International Rice Research Institute (IRRI) under CGIAR. Dr. Atta-Krah and 5 other staff presented the profile of the Bioversity International, 3 major activities of the Centre, and on-going projects with China. Both sides agreed to hold a workshop in China in 2009 to define the priority areas and the mode for forthcoming cooperation.

6. Number of Chinese students studying in the US increases by 19.8% in 2008

(People's Daily, 12-12-2008)

The US is the leading destination for Chinese students pursuing overseas studies. In the 2007-2008 academic years, there were 81,127 students from China enrolled in higher education institutions in the US, up 19.8% from last year. The rise is mainly attributed to the relaxing of US visa policies. According to the US Institute of International Education's latest statistics released in November 2008, the number of Chinese students studying in the US this year increased by 13,404 compared to last year. Overseas students for the 2007-2008 academic years brought the US huge economic benefits through tuition fees and living expenses. Enrolment of overseas students has already become an important supplement to the US economy. Therefore, insiders are saying that in the face of the ongoing financial crisis, the US government is certain to continue to encourage students from foreign countries to study in the US. US universities will continue to welcome students from China, so the stable and relaxed visa policies for overseas students will remain in place. It has been learned that officials from the consulates of countries such as Bulgaria and Poland located in Shanghai said recently that they will create more favourable policies for Chinese students in terms of visas and scholarships.

7. Enrollment of graduate students for master's degrees to see a year-on-year increase of 5%

(People's Daily, 15-12-2008)

The Ministry of Education and the National Development and Reform Commission jointly issued a circular calling for a year-on-year increase of around 5% in the enrolment of graduate students for master's degrees in 2009 and a year-on-year increase of 1.7% in the enrolment of doctoral candidates. It was pointed out in the circular that, with regard to graduate education in 2009, the rate of doctoral candidate enrolment should remain basically stable while the rate of enrolment of graduate students for master's degrees should increase at a moderate pace. The enrolment structure should be readjusted and its quality improved. The circular also requires all units to make active efforts to promote reforms of the graduate education system to improve the quality of graduate education.



Events (March – May 2009)

March 2009

14th China International Education Exhibition Tour CIEET

Date: February 28 – March 15, 2009

Place: Beijing – Xian – Shanghai – Nanjing – Guangzhou

- Education fair for institutions and countries from all over the world to present their education programs. Swiss booth organized by the Embassy of Switzerland will be present in Xian.
- For further details pls. contact Mrs. Christine Kyburz (Email to Christine.Kyburz@eda.admin.ch)

14th International IC Exhibition & Forum

Date: 5 March 2009

Place: Beijing

- IC chips for household appliances and industrial equipment

China Fashion Week 2009

Time: March 2009

Place: Beijing

- Organised by the Beijing Fashion Association

Dental South China Exposition 2009

Time: March 2009

Place: Guangzhou

- Dental medical treatment exhibition, organized by the Guangdong Foreign S&T Exchange Centre

22nd China (Zhejiang) International Science, Education, Medical Equipment Supplies & Technical Exchange Exhibition

Time: March 2009

Place: Hangzhou

- R&D, Manufacturing and Maintenance of Medical Instrument exhibition, organized by the Zhejiang Provincial S&T Department / Department of Health

EXPO BUILD China 2009

Time: 31 March – 3 April 2009

Place: Shanghai

- The biggest annual expo for the building industry, architecture, construction, and materials

April 2009

2009 APAIE Conference & Exhibition

Date: 15 – 17 April, 2009

Place: Beijing

- The top higher education conference in China. Several Swiss Universities have confirmed their participation and a Swiss booth will be organized by the Embassy of Switzerland.
- For further details pls. contact Mrs. Christine Kyburz (Email to Christine.Kyburz@eda.admin.ch)

2nd International Workshop on Synchrotron Radiation Circular Dichroism Spectroscopy

Date: April, 2009

Place: Beijing

- Academic exchange

2009 Workshop on the Physics of Excited Nucleon

Date: April, 2009

Place: Beijing

- Academic exchange



May 2009

CHITEC Exhibition 2009 – the 12th China Beijing International High-tech Expo

Date: 20 – 24 May 2009

Place: Beijing

- Annual high-tech expo in Beijing

2009 China International Weighing Instrument Exhibition

Date: 5 May 2009

Place: Shanghai

- Electronic Balance Weighing System Weighing Instrument

International Solar Energy & PV Projects (Shanghai) Exhibition, SNEC International Solar and PC Conference

Date: 6 May 2009

Place: Shanghai

- Solar energy, PV project

Shanghai Int'l Exhibition & Seminar on New Tech. and New Equipment of the Starch Industry 2009

Date: 13 May 2009

Place: Shanghai

- Starch and Related Productions and Equipment

The 3rd China (Beijing) Int'l Exhibition and Symposium on Police and Anti-Terrorism Technology and Equipment

Date: 19 May 2009

Place: Beijing

- Police vehicles; Supervising, checking and monitoring equip.

2009 Int'l Equipment Exhibition & Technical Seminar of Forensic Science, Narcotics Control and counter - Terrorism

Date: 20 May 2009

Place: Beijing

- Equipments & products for forensic science, investigation, drug control and anti-terrorism, police vehicles, police protection, etc

The 3rd Shanghai Int'l Aerospace Technology and Equipment Exhibition

Date: 26 May 2009

Place: Shanghai

- S & T cooperation and exchange

Aviation Tech. Expo China 2009

Date: May 2009

Place: Beijing

- Aviation Equipment

Int'l Conference on Scientific Computation and Differential Equations

Date: May 2009

Place: Beijing

- Academic Exchange

Int'l Conference on Mathematical Control Theory

Date: May 2009

Place: Beijing

- Academic Exchange

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