



# Science, Technology and Education News from China

## Number 72 – June 2010

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### Introduction

As Chinese government repeatedly stress the importance of Small and Medium Enterprises (SME), this month's newsletter starts with an overview of the role SME plays in China and how the Chinese government has been supporting SME's development. This month also sees ten year anniversary of national science and technology library, the release of Chinese Medium and Long-Term Talent Development Plan, the establishment of green leap center, the determination of the government to improve psychiatric hospitals and the opening of 6<sup>th</sup> International Education Fair in Wuhan.

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<sup>1</sup> Please click on the blue texts to activate the hyperlinks to either email addresses or related websites.



## Policy

### Small and Medium Enterprises in China

Chinese small and medium enterprises (SME) are of vital significance to not only economic development but also the advancement of science and technology in China. Until the end of 2009, the number of Chinese small and medium enterprises exceeded 10.23 million, contributing 60% of the national GDP, 50% of the total tax revenue and 70% of the total import & export trade revenue. Chinese small and medium enterprises also offer 80% of all the job opportunities on the employment market, own 65% of the patents for invention, and are the masterminds of 68.9% of the newly developed products<sup>2</sup>.

To help small and medium enterprises to better position themselves and to compete in the market, several institutions have been established to offer necessary guidance and support. **Department of Small and Medium Enterprises** of the **Ministry of Industry and Information Technology (MIIT)** is considered as the flagship in such supportive agency. Besides providing general guidance to the development of small and medium enterprises in all sectors, Department of Small and Medium Enterprises also drafts industrial standards while taking into consideration the interests of SME, releases necessary regulatory policies relevant to SME, and supervise local government's efforts to support SME. Two institutions currently under MIIT, namely **China Center for Promotion of SME Development** and **China International Cooperation Association of Small and Medium Enterprises** are also functioning to support.

Small and Medium Enterprises are also represented by **Chinese Association of Small and Medium Enterprises (CASME)**, a grassroot association originally co-founded by a group of SME directors. Currently CASME works as a bridge between the government and the enterprises, and also as an information platform, consulting agent and service provider for domestic SME.

Special grants for SME have been allocated by the Ministry of Science and Technology, the Ministry of Finance, and the National Development and Reform Commission. Among them, **Innovation Fund for Technology-Based Firms** is a particular fund to support research and innovation activities of SME. Funding is provided to technology-based SME in the forms of appropriation, loan interest subsidy and equity investment.

Since 1999 when the fund was first introduced, more than 20,000 Chinese SME have applied for such support, among them 12,000 eventually received funding. Among the enterprises which received funding, 33% were entrepreneurial enterprise, and 59.5% hired less than 100 employees<sup>3</sup>. A total of CNY 10.45 billion funding from the central government has been provided to SME, providing vital capital support to the transformation of industrial structure and the development of emerging industries in China. By the end of 2008, 4,202 patents, among them 1,334 patents for invention have been granted to 2,738 projects funded<sup>4</sup>.

In 2010, the priority areas set by the fund include: **electronic information, biology and medical sciences, new material, Opto-Mechatronics, resource and environment, new energy and energy efficiency as well as high-tech service industry**. In the first half of 2010, a budget of 2.48 billion was prepared to support 3,437 projects, covering all the above-mentioned priority fields.

<sup>2</sup> National People's Congress, [http://www.npc.gov.cn/huiyi/cwh/1112/2009-12/26/content\\_1533154.htm](http://www.npc.gov.cn/huiyi/cwh/1112/2009-12/26/content_1533154.htm)

<sup>3</sup> Speech of Minister WAN Gang during the celebration of 10 Year Anniversary of Innovation Fund for Technology-based Firms, [http://www.innofund.gov.cn/info\\_view.asp?infoid=1465](http://www.innofund.gov.cn/info_view.asp?infoid=1465)

<sup>4</sup> ibid.



## News

### 1. Opening of China Biotech and Industry Development Forum

(S&T Daily, 02-06-2010)

China Biotech and Industry Development Forum, jointly organized by Population and Resources Committee of National Committee of People's Political Consultative Conference (CPPCC), and several democratic political parties in China, was opened on June 2 2010.

As the revenue of biotech industry doubled every 5 years, in recent years, the growth of biotech industry far exceeds world's average economic growth rate. It is expected that by 2010, global revenue on bio economy will reach USD 15 trillion, replacing information technology industry to be the new pillar industry.

Responding to such importance, Chinese representatives present at the forum, which include the Ministry of Health, the Ministry of Science and Technology, and the Ministry of Agriculture all identified the future development of China in the field of Biotechnology.

The Ministry of Science and Technology marks 8 priority areas in the development of biotechnology, including basic research on frontier topics in life science; improvement of output and quality of agricultural products, development of bio-medical technology, development of industry biotechnology, development of bio-intelligent engineering to ease the pressure of energy shortage, development of applied biotechnology to improve ecological environment, and further development on biotechnology to foster new related industries.

The Ministry of Health also announced that development of bio-medical industry will be a priority in its 12<sup>th</sup> "Five-Year Plan". In the final year of the implementation of 11<sup>th</sup> "Five-Year-Plan", the Ministry of Health has already strengthened the link between research institutes with universities and industries, trying to create an environment where enterprises take the leading role, especially in the area of product development. Such pattern of participation will be carried on into the next Five-Year-Plan with further improvement, with the goal of further promoting innovation.

### 2. Ten Year Anniversary of National Science and Technology Library

(Ministry of Finance, 12-06-2010)

On June 12, 2010, Chinese National Science and Technology Library (NSTL) celebrated its 10 year anniversary. Established in 2000, NSTL is now the most influential non-public science and technology literature archive system in China and is well-received among Chinese researchers and staff in Science and Technology field.

NSTL was founded by the Ministry of Science and Technology, in partnership with the Ministry of Finance, the Ministry of Commerce, the Ministry of Agriculture, the Ministry of Health and Chinese Academy of Sciences. As an inter-ministerial public institution, NSTL covers four professional areas: science and technology, industry, agriculture and medical sciences and includes 9 important Chinese science and technology literature information providers. The director of NSTL is elected by a board, which consists of representatives from the founding ministries and institutions. The director, together with the board, supervise and operation of NSTL.

The establishment of NSTL was more than an investment in a library. It is expected to provide information inquiry services to scholars and researchers nationwide. But more importantly, it has been considered as a success story of how different departments of Chinese government allocate their resources collectively and coordinate to co-found and co-manage a public institution with important national interests.



### 3. China Aims to Increase Talent

(China Daily,08-06-2010)

**Following the Medium and Long Term Education Development Plan, Science and Technology Development Plan, China goes on to issue another Medium and Long Term Talent Development Plan, aiming to increase talent.**

By issuing such plan, which has been putting cultivating talent as the nation's strategy, the government has set a blueprint for creating a highly skilled national work force in the next 10 years.

The plan says as part of China's modernization process, people's education must be improved. China has to transform itself from being labor-rich to talent-intensive.

Cultivating a group of world-class scientists and building an independent innovative country has been one of China's national strategies. The plan aims to increase the number of research and development personnel to 4 million by 2020. [...]

The Plan lists six major categories of "talent" that the government will help cultivate, ranging from political leaders, entrepreneurs to high-tech researchers and professional social workers. The government will also conduct large-scale training programs to encourage more college graduates to work in China's rural areas to help local farmers to live a better life.

[http://www.chinadaily.com.cn/china/2010-06/06/content\\_9940125.htm](http://www.chinadaily.com.cn/china/2010-06/06/content_9940125.htm)

### 4. Industry Participation of National Key Lab Enhanced

(Beijing Municipal Science and Technology Commission, 18-06-2010)

Beijing Municipal Science and Technology Commission has been working to promote the establishment of **industry-based state key lab**, which formerly can only be found in research institutes and universities. As the first enterprise authorized by the Ministry of Science and Technology to do so, Beijing Rechsand Science & Technology Group Co., Ltd is taking the lead in innovation among Chinese enterprises. Another 4 enterprises are in the process of applying for establishment of state key lab in their enterprises.

Until now, 94 industry-based state key labs have been authorized by the Ministry of Science and Technology. Among them, 23 labs are in Beijing, accounting for 24.5% of the total. The purpose of including industry in state key lab is to guide enterprises into taking a more proactive role in research on frontier science, applied research in key technologies and integrated research of major technologies, and to involve industry in drafting industrial standards. The goal is to further improve Chinese technological innovation system into an industry-based, market-oriented one with strong links between universities, industry and research institutes.

### 5. Green Leap Center Established

(MoST, 11-06-2010)

A Center for Green Leap Research, jointly created by School of Economics and Management, Institute of Nuclear and New Energy Technologies, and Dept. of Engineering, all affiliated to Tsinghua University, was inaugurated on June 11, 2010. The new center will sort out the role models showing the green leap with Chinese characteristics, and study the factors affecting the green leap, in an attempt to feed enterprises with the information on sustainable innovation and green leap. It will also work on the policy issues assigned by government, and stage green leap demonstrations in collaboration with government or NGOs.

The Center has a range of objectives to realize, including preparing a report on Chinese businesses' green leap practice, summarizing and diffusing Chinese businesses' proven green leap practices; making green leap part of the EMBA and MBA courses, enhancing corporate managers' green development



awareness; and providing proven experience of sustainable development to the entire country, and even to the whole world, making China a cradle of green leap development.

With the support of Chinese Ministry of Science and Technology and Tsinghua University, the center will work with Cornell University, raising the research level and international influence of Tsinghua University in the area of green management.

## 6. **China's Health Authorities Plan to Improve 550 Psychiatric Hospitals**

(Xinhua, 22-06-2010)

China's health authorities are taking urgent steps to address the growing risks of leaving severe mental patients untreated following a spate of violent assaults in recent months.

Vice-Minister of Health Yin Li said the ministry is planning to renovate or expand 550 psychiatric hospitals and departments across the country in two years. Other measures include establishing a registration system and free mental health counseling hotlines for patients, improving access to mental health services particularly at the grassroots level, and seeking to provide free treatment for those whose condition is serious, Yin said. [...]

Currently, more than 100 million Chinese suffer from various mental illnesses, including 18 million serious patients, according to official estimates. Due to the social stigma attached to mental illnesses, limited access to care and economic constraints, a majority of them have never received any medical aid, experts warned.

In China, for every 100,000 people, there are about 1.26 qualified psychiatrists, far lower than the global average of four. [...] The government has swung into action following a spate of fatal attacks in recent months committed by those suspected of being mentally ill.

About 82 percent of the 1,515 people who were accused of criminal offenses and underwent psychiatric evaluation at a Beijing hospital from 1984 to 1996 suffered from mental illnesses, Xinhua reported on Monday. In response, the ministry launched a nationwide mental health program in February, requesting each province to set up at least one psychological counseling helpline by the end of the year

[http://news.xinhuanet.com/english2010/china/2010-06/22/c\\_13362125.htm](http://news.xinhuanet.com/english2010/china/2010-06/22/c_13362125.htm)

## 7. **6<sup>th</sup> Wuhan International Education Fair**

(Swiss Embassy, 26-06-2010)

On June 26th -27th the Swiss Universities were represented for the first time in the Wuhan International Education Expo held in the 14 Mio. city Wuhan divided by the Yangzi River in the province of Hubei, South China.

The presentation made in the two top universities in the region, the Wuhan University and the Hubei University of Science and Technology (Huazhong University) attracted a large number of students eager to more about the possibilities of studying in Switzerland, a country still less known for its excellent studies and researches opportunities than for its high quality products.

On the occasion of this education event the three delegates of the Swiss Embassy in Beijing accompanied by Mr. Nicolas Musy, representative of EPFL in China met with provincial and municipal authorities, in order to discuss further cooperation in the fields of science and technology and especially in the researches of new energies, in particular the solar energy researches made in the Graetzel Center which will be officially opened in July in Huazhong University, by EPFL Professor Michael Graetzel, designer of solar cells in the Swiss Pavilion at Shanghai EXPO 2010. Professor Graetzel was awarded the Millennium Technology Prize 2010, one of most widely-followed award in the field of science and technology.



## Events (July– August 2010)

### July 2010

#### **32<sup>nd</sup> International Conference on Coastal Engineering**

Date: July 1<sup>st</sup>  
Place: Shanghai  
Contact: Chinese Society of Oceanography, CAST

#### **Global Health Diplomacy Course**

Date: July 5<sup>th</sup>-9<sup>th</sup>  
Place: Peiking University  
Contact: Institute for Global Health, Peiking University

#### **Annual Conference of the Academy of Innovation and Entrepreneurship, AIE 2010**

Date: July 9<sup>th</sup>-11<sup>th</sup>  
Place: Beijing  
Contact: AIE Program Committee, Tsinghua University

#### **Top to Top / Lectures**

Date: 5th-14th July  
Place: Shanghai  
Contact: Swissnex China

#### **Shanghai International Juvenile Scientific Expo. 2010**

Date: July 13<sup>th</sup>  
Place: Shanghai  
Contact: Science and Technology Commission of Shanghai Municipality

#### **2<sup>nd</sup> International Workshop on Energy and Water Cycle over the Tibetan Plateau and High-elevations**

Date: July 19<sup>th</sup>  
Place: Lasa  
Contact: Institute of Tibetan Plateau Research, CAS

#### **4<sup>th</sup> International Workshop on Catchment-scale Hydrological Modeling and Data Assimilation, CAHMDA-IV**

Date: July 21<sup>st</sup>  
Place: Lasa  
Contact: Cold and arid Regions environmental and engineering research Inst., CAS

#### **2010 Science and Art International Seminar**

Date: July  
Place: Beijing  
Contact: Graduate School of CAS, 010-68597749

#### **BIT's 3<sup>rd</sup> World Congress of Industrial Biotechnology 2010**

Date: July 25<sup>th</sup> – 27<sup>th</sup>  
Place: Qingdao  
Contact: <http://www.bit.ibio.com>

#### **BQQ Lecture/Design and Architecture**

Date: July 29<sup>th</sup>  
Place: shanghai  
Contact: Swissnex China

#### **Nobel Lectures with WANG Yifang and Niklaus Berger (IHEP)**

Date: July 31<sup>st</sup>  
Place: China Science and Technology Museum, Beijing  
Contact: Swissnex China

### August 2010

#### **The Second International Conference on Service Science and Innovation**

Date: August 8<sup>th</sup> – 10<sup>th</sup>

Place: Beijing  
Contact: <http://www.icssi.org>



**Qingdao Industrial Equipment Fair**

Date: August 11<sup>th</sup>-13<sup>rd</sup>  
Place: Qingdao International Convention & Exhibition Center  
Contact: Qingdao International Convention & Exhibition Center

**China Power Transmission and Control Technology Exhibition**

Date: August 11<sup>st</sup>-13<sup>rd</sup>  
Place: Qingdao Internatioanl Convention & Exhibition Center  
Contact: Qingdao International Convention & Exhibition Center

**Swiss National Day / Visit FC Doris**

Leuthard  
Date: 12th August  
Place: Shanghai  
Contact: Presence Switzerland

**2010 Shanghai International Architecture Forum**

Date: August 14<sup>th</sup>  
Place: Shanghai  
Contact: Tongji University

**2010 TWAS Workshop on Safe Water Quality in Developing Countries**

Date: August 17<sup>th</sup>  
Place: Beijing  
Contact: Research Center for Eco-Enviornmental Sciences, CAS

**Einstein Series: Talk by Nobel Lectures Rolf Zinkernagel**

Date: August 18<sup>th</sup>  
Place: China Science and Technology Museum, Beijing  
Contact: Swissnex China

**World Cancer Congress**

Date: August 18<sup>th</sup>-25<sup>th</sup>

Place: Shenzhen  
Contact: Chinese Medical Association

**The International Congress on Internet Technology and Applications**

Date: August 20<sup>th</sup>-22<sup>nd</sup>  
Place: Wuhan  
Contact: <http://www.itapconf.org/2010/>

**14<sup>th</sup> International Conferences on Surface Sciences**

Date: August 23<sup>th</sup>-27<sup>th</sup>  
Place: Beijing  
Contact: Chinese Vacuum Society

**Design Preis Schweiz & Red Container**

Date: 23rd August – 5th September  
Place: Shanghai  
Contact: Swissnex China

**5<sup>th</sup> Internatioanl ICST Conference on Communications and Networking in China**

Date: August 25<sup>th</sup>-27<sup>th</sup>  
Place: Beijing  
Contact:  
<http://www.chinacom.org/2010/index.html>

**BQQ Lecture / Art and Museum**

Date: 26th August  
Place: Shanghai  
Contact: Swissnex China

**Einstein Series: Talk by FANG Zaiqing, Expert on Eistein**

Date: August 28<sup>th</sup>  
Place: China Science and Technology Museum, Beijing  
Contact: Swissnex China