CHINA SCIENCE AND TECHNOLOGY NEWSLETTER

Department of International Cooperation
Ministry of Science and Technology(MOST), P.R.China

No. 03
February 15 2016

News of International Science and Technology Cooperation

Scientific and Technological Reform and Innovation

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Deputy Assistant Secretary of the United States Department of Energy Visits the Ministry of Science and Technology

On January 28, 2016, Deputy Assistant Secretary of the United States Department of Energy visited the Ministry of Science and Technology. The two parties conducted in-depth discussions on the cooperation under the mechanism of Clean Energy Ministerial Meeting (CEM) between China and the US, and the initiative of "Mission Innovation" declared during United Nations Climate Change Conference in Paris. The two parties reviewed cooperation conducted under the mechanism of CEM over the years, and exchanged views mainly on preparations for the seventh CEM (CEM7) to be held in the US and preparatory meetings (CEM7 Prep) to be held in China. They also exchanged views on topics like CEM steering committee and work groups set up under it, the setting of CEM secretariat, implementation of the electric vehicle 2.0 (EVI2.0) initiative, and the next phase work of "Mission Innovation".

(Source: Ministry of Science and Technology, February 14, 2016)

Yin Hejun, Vice Minister of Science and Technology, Meets ITER Council EU Delegation

In the morning of January 15, 2016, Yin Hejun, Vice Minister of Science and Technology, met the International Thermonuclear Experimental Reactor Program International Fusion Energy Organization (ITER Organization) Council EU delegation, and Mr. Thomas, deputy director of the Directorate-General for Energy of the European Commission. The two parties exchanged in-depth views on important topics during the current implementation process of the ITER program, like long-term schedule of the project, independent evaluation, and the time of the first plasma. The Vice Minister said that Chinese government pays pay high attention to the ITER program, and affirmed the remarkable achievements of the ITER program with the contributions of various parties. During the talk, he emphasized that nuclear fusion energy plays a crucial role in environment and future development of energy, and the ITER program will exert far-reaching impacts on the development of technology and the promotion of intergovernmental cooperation and communications among scientists. Then, the two parties exchanged in-depth views on current main challenges and problems of the ITER program.

(Source: Website of the Ministry of Science and Technology, February 6, 2016)

The Second BRICS Technological Innovation Fund Donors Conference Convened in Beijing

From January 19-20, 2016, the second BRICS Technological Innovation Fund Donors Conference and the first Fund Donors Work Group Conference were convened in Beijing. Nearly 40 persons from the five

BRICS countries attended the conference which was hosted by Russia, the presidency.

BRICS is the most important cooperation mechanism of emerging and developing countries. In recent years, scientific and technological innovation cooperation among BRICS countries has achieved significant development. To implement the results of the second BRICS Ministerial Conference on Technology and Innovation held in Brazil in March, 2015, the first BRICS Technological Innovation Fund Donors Conference held in Russia in July, 2015 and the third BRICS Ministerial Conference on Technology and Innovation in Russia in October, representatives of various fund donors from the five BRICS countries met in Beijing to discuss together important issues like the key areas, fund arrangement, funding principles, funding mechanism and the operation of work groups of the projects jointly solicited by the five BRICS countries, and they reached consensuses on multiple issues.

The meeting decided the five BRICS countries would start joint solicitation of projects, and the first project solicitation guidelines were planned to be released within this year.

(Source: Website of the Ministry of Science and Technology, February 6, 2016)

The Minister of Science and Technology Talks about Scientific and Technological Reform and Innovation Development

On February 24, 2016, at the news conference named "scientific and technological reform and innovation development" held at the Information Office of the State Council, Wan Gang, the Minister of Science and Technology, disclosed that our country had achieved breakthroughs in the allocation of scientific and technological resources, plan management reform, the commercialization of research findings and talents evaluation; with continuous efforts, major achievements and top talents keep emerging in our country, mass entrepreneurship and innovation are flourishing, scientific and technological innovation capacity is remarkably strengthened, and we have entered the new historical stage of "the Coexistence of Three Runnings" (follow, keep pace, and take the lead in terms of science and technology innovation).

Technological Innovation Supports National Economy

Technological innovation is accelerating and making breakthroughs in application. It is promoting the continuing development of new momentums and the transformation and upgrading of traditional momentums. This is specifically embodied in two aspects: First, technological innovation supports industrial transformation and upgrading, and major science and technology projects form new production capacities. Contribution rate of scientific and technological progresses has increased from 50.9% to 55.1%. Secondly, strategic high technologies come close to people's livelihood and enter the market to create new markets and new consumptions.

Basic Researches in Our Country Should Be Strengthened from the Following Four Aspects

Basic researches and frontier exploration are the keys for a country to enhance its original innovation ability. First of all, improve the system and mechanism which support basic researches. Second, forward-looking layout should be intensified. Thirdly, continue to strengthen the construction of basic research bases, including state key laboratories, national engineering center and key laboratories built in enterprises. The fourth and also the important one is the training of basic research talents.

Develop Maker Spaces to Serve the Real Economy

At present, mass entrepreneurship and innovation are becoming new engines of economic development in our country. There are nearly 500 maker spaces and 700 enterprise incubators, accelerator and industrial parks, forming a continuous and orderly entrepreneurial ecology. In the future, the development of maker spaces should be accelerated to serve the transformation and upgrading of the real economy. First, lead more and more maker spaces to develop towards real economy; second, encourage leading companies to open market and equipment resources in the directions of main businesses and join medium, small and micro enterprises, universities, research institutes and the broad masses of makers in entrepreneurship and innovation; third, support research institutes and universities to construct maker spaces based their advantages of professional fields, open technological, equipment and personal resources and lead young people in entrepreneurship and innovation; fourthly, construct a batch of platforms focusing on maker spaces in national high-tech zones and independent innovation demonstration zones; fifth, lead the investment of social resources, and create talent exchange mechanism.

(Source: Science and Technology Daily, February 25, 2016)

R&D Input Intensity in China Continues to Grow

According to the data of National Science and Technology Funds Statistical Bulletin of 2014, the total inputs of R&D funds in 2014 of our country is RMB 1301.56 billion, an increase of RMB 116.9 billion compared with last year. R&D input intensity has been greater than 2% for two consecutive years and shows the trend of continuous growth. The fund percentages of enterprises, research institutes of the government and universities are respectively 77.3%, 14.8% and 6.9%. R&D funds of enterprises are RMB 1006.06 billion, an increase of 10.9% compared with last year, and the growth rate is higher than those of research institutes of the government and universities by 2.8% and 6.1% respectively; their contribution rate for the increase of all social R&D funds is 84.2%, a growth of 4.5% compared with the previous year.

(Source: Science and Technology Daily, January 7, 2016)

China has Become a Main Promoter for Intellectual Property Growth in the World

According to World Intellectual Property 2015 report, application numbers of patents, trademarks and industrial designs of China in 2014 are all the first in the world, and China has become the main driving force for the development of global intellectual properties. In the opening chapter of World Intellectual Property 2015 report, it clearly points out that under unclear global economic conditions, intellectual properties still grow vigorously in most countries of the world. China has become a leading promoter for global intellectual property growth, and its role is more remarkable than ever before.

According to the report, about 2.7 million patent applications are submitted in 2014 in the world, a growth of 4.5% compared with 2013. The number of patent applications of China is 928,177, No. 1 in the world, exceeding the total of America and Japan, the second and third respectively. The numbers of patent applications of America and Japan are 578,802 and 325,989 respectively.

Meanwhile, the report points out that a total of 1.18 million patents are authorized in 2014. The total number of global valid patents is 10.2 million, and the percentages of the US, Japan and China are respectively 24.7%, 18.8% and 11.7%. According to the report, the number of trademark applications in 2014 has a growth of 6% compared with last year. The number of applications of China is 2.22 million, No. 1 in the world, a growth of 18.2% compared with 2013. The numbers of the US and EU are 471,228 and 333,443, the second and third respectively. For industrial design, the application number is 564,555, a decrease of 14.4% compared with last year, but still the first in the world. It is followed by EU and South Korean respectively. Application number of plant variety protection in 2014 grows by 3.3% compared with last year. European Community Plant Variety Office accepts the biggest number of applications, a total of 3,625, and it is followed by China and the US, their numbers being 2,026 and 1,567 respectively.

(Source: Science and Technology Daily, ecember 16, 2015)

American Experts Talk about Innovation in China

Despite of the gap from innovation powerhouses, China has already determined to accelerate the process of becoming one of them in the world. What should China do to become an innovation powerhouse? According to Professor Scott Kennedy, deputy director of the Freeman Chair in China Studies and director of the Project on Chinese Business and Political Economy at CSIS, main advantages of China in innovation were shown in three aspects: big quantity of talents who have received higher education, huge domestic market and powerful manufacturing. Dr. Denis Simon, an American expert of the China-U.S. Innovation Dialogue and winner of China National Friendship Award, thinks that advantages of China in innovation are shown in five aspects: First is the advantage of talents. Chinese universities have cultivated enough talents who are scientists and engineers in the future, and the number of engineering doctors in China has exceeded that in the US. Second is the advantage of funding. China enjoys sufficient funding for innovation. The R&D fund of China has realized an annual growth rate of over 20% fo5 five or six consecutive years. Third is the advantage of equipment. At present, China still boasts world-class equipment and facilities. Fourth is the advantage of strong manufacturing. Fifth is the advantage of huge market. Dr. David Allan Grier, former chairman of the US Institute of Electrical and Electronics Engineers (IEEE) Computer Society and associate professor of International Science and Technology Policy and International Affairs in George Washington University Elliott School of International Affairs, said that not only the number of Chinese creative talents is huge, but also they have a global vision. He thought that due to the policy of opening-up of China, Chinese scholars can learn new ideas abroad and then bring them back to China.

(Source: Science and Technology Daily,
December 10, 2015)

Release of Annual Report of Regional Innovation Capacity of China

The Report of Regional Innovation Capacity of China 2015 undertaken by the Research Group on Strategies for Science and Technology Development and National Research Center for Innovation and Entrepreneurship of University of Chinese Academy of Sciences was released in Beijing.

The report pointed out that the first nine places in the ranking of regional comprehensive capacity in innovation were respectively Jiangsu, Guangdong, Beijing, Shanghai, Zhejiang, Shandong, Tianjin, Chongqing and Anhui, the same with 2014. Meanwhile, Fujian became the tenth by replacing Hubei. According to the report, Inner Mongolia Autonomous Region rose most significantly in the ranking of regional comprehensive capacity, from the 27th in 2014 to the 21st in 2015. This was mainly because of the substantial rise of Inner Mongolia Autonomous Region in the ranking of knowledge acquisition capacity and innovation environment. In addition, Guizhou and Hainan also rose prominently in the ranking.

The report also pointed out that changes in the ranking indicate that regions with strong innovation capacities had multiple and relatively stable innovation incentives; for some second and third tier regions, their innovation capacities mainly relied on the driving forces of resource and investment, so influenced by international financial crisis and domestic development model of the new normal, their positions showed the trend of declining. Nevertheless, this was not closely associated with geographic locations. The ranking of some provinces in northwestern regions still rose.

At present, a stable pattern of regional innovation capacity has been basically formed: Rankings of east regions were stable, and advantages of leading regions were gradually expanded; central and western regions were still weak as a whole with periodic fluctuations; innovation of the old industrial bases in northeastern

region was yet to be enhanced, their innovative vitality needed to be urgently activated. Notably, comprehensive ranking of the three provinces in northeastern region has declined for two consecutive years as a whole, and innovation capacity of Hebei has become the weakness impeding the synergetic development of Beijing - Tianjin - Hebei. The phenomenon of a "long tail" existed in the distribution of regional innovation capacity: Leading provinces with Jiangsu and Guangdong as the representatives were basically far ahead, which was the extensive central and western regions. The development of a large number of regions was still driven by investment and elements. The bases of technological factors in these regions were weak with low level of marketization and poor innovation and entrepreneurship environment, and long-term cultivation was needed to realize innovation-driven transformation.

(Source: Science and Technology Daily, December 7, 2015)

China Ushers in the Fourth Entrepreneurship Wave

2015 China Labor Market Report was released in Beijing. The report pointed out that our country was ushering in the fourth entrepreneurship wave, and a new generation of highly educated and highly skilled entrepreneurs with great entrepreneurship ambitions was leading the innovation-driven entrepreneurship. According to the report, since the reform and opening up, there have been three entrepreneurship waves in China: the first was from the beginning of reform and opening up to 1984, the second was in the middle of 1990s, and the third was from 2002 to 2004. Since 2012, China has entered the fourth entrepreneurship wave. Especially since 2014, average number of newly registered enterprises has exceeded 10,000 each day. The whole society showed great enthusiasm for mass entrepreneurship and innovation.

Current innovation and entrepreneurship activities in China were featured by gradual improvement of the policy system which supported the promotion of employment by entrepreneurship, increasingly apparent effects of the expansion of employment by entrepreneurship, the promotion of employment by technological innovation, etc. At present, entrepreneurship activities of most industries in cities were more active than those in the countryside, especially for the service sector, and this accelerated the progress of transformation and upgrading of employment structure. The people who participated in entrepreneurship activities were increasingly diversified, and the industrial pattern with college students, migrant workers and laid-off workers playing the major role is changing. According to research, the percentage of people with master and doctor degrees (including post doctorate) in the new generation of entrepreneurs is 37.55%. For the new generation of entrepreneurs, they were becoming highly educated, highly skilled and highly ambitious in entrepreneurship, thus dominating the innovation-driven entrepreneurship. These entrepreneurs had rich experience, and the percentage of those who started their entrepreneurship activities after quitting their jobs with years' experience has reached 91.8%. Before starting entrepreneurship activities, these entrepreneurs have gained an understanding of 87.97% of the industries they are dedicated to. According to research, 85.19% of those under survey were satisfied with the choice of "giving up employment, choosing entrepreneurship", while less than 1.5% were dissatisfied. For most entrepreneurs, entrepreneurship, a rare experience in life, has exerted positive influences to themselves.

(Source: Science and Technology Daily, November 23, 2015)