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China and Nigeria Sign Inter-governmental MOU on S&T Cooperation

On April 12th 2016, President Xi Jinping and Nigerian President Muhammadu Buhari held talks at the Great Hall of the People. They also witnessed the signing ceremony of the Memorandum of Understanding on Science & Technology Cooperation between the two countries. The MOU was signed by Wang Zhigang, Chinese Vice Minister of Science and Technology and Christopher Ogbonnaya Onu, Nigerian Minister of Science and Technology. According to the MOU, the two sides are to establish a joint committee to advance various forms of cooperation in science, technology and innovation between government departments, research institutions, academia and businesses. Both sides are to jointly support demonstration and research; promote personnel exchange; organize symposiums, exhibitions and training courses. The MOU provides a solid basis for further cooperation under the framework of the Sino-Africa S&T Partnership.

Source: CISTC, April 15, 2016

Minister Wan Attends Sino-German Innovation Conference

On April 13th 2016, the 4th Sino-German Innovation Conference was held in Berlin. Wan Gang, Chinese Minister of Science and Technology and Georg Schuette, Deputy Minister of the German Federal Ministry of Education and Research addressed the Conference.

Minister Wan noted that the two sides should continue to advance real cooperation in S&T frontiers. First, China and Germany should further open cooperation in basic research and S&T infrastructure. This is to facilitate the engagement of academia and research institutes on both sides in exchange and joint research to tackle global challenges like resources, environment and climate change. Second, efforts should be made to develop joint platforms for innovation cooperation, especially in the areas of IT, energy, environment, transportation, health and manufacturing industry, so as to expedite socio-economic development through science, technology and innovation (STI). Third, both countries could enhance cooperation on science parks and new incubator types such as makerspaces. This is to encourage young people to innovate and start their own businesses. Fourth, both sides could have in-depth study on and exchange of innovation strategies and policies.

The conference has three paralleled sections on the national innovation system, innovation in urbanization, and key areas of joint R&D. Prior to the conference, the two leaders also exchanged views on further research and innovation cooperation and reached consensus on the importance of supporting youth innovation and entrepreneurship.

Source: CISTC, April 14, 2016

China and Switzerland Further S&T Cooperation and Exchange

On April 8th 2016, Wan Gang, Chinese Minister of Science and Technology met Schneider-Ammann, visiting President of the Swiss Confederation. The two sides issued a joint statement on further cooperation in science, technology and innovation through a new strategic partnership. The bilateral cooperative tie in the S&T arena

has been sound and stable over a long time. In recent years, China and Switzerland have started innovation cooperation in the field of translational medicine. Since 2015, research institutions have been encouraged to carry out joint research and thus enabled an increase of exchange and cooperation between foundations and research institutions in the two countries. Minister Wan and President Schneider-Ammann fully recognized the progress and exchanged views on furthering STI cooperation.

Source: Website of the Ministry of Science and Technology, April 13, 2016

China and Denmark Consolidate STI Cooperation

On the morning of April 7th 2016, Minister Wan Gang met visiting Danish Ambassador to China Carsten Damsgaard at the Chinese Ministry of Science and Technology. They exchanged ideas about Minister Wan's upcoming visit to Denmark for the 19th session of bilateral S&T Joint Committee meeting co-chaired by Ulla Tørnæs, the Danish Minister of Higher Education and Science. Minister Wan briefly reviewed the bilateral S&T cooperation and recognized the progress made. He noted that China is implementing the strategy of innovation-driven development. S&T innovation and high-tech development have significantly contributed to China's economic restructuring, sustained rapid growth and motivated the public to engage in business start-ups and innovation. Minister Wan also discussed with the Danish side about major topics of the Joint Committee meeting. He hoped that the two countries could advance cooperation to further integrate innovation resources, develop sound mechanisms, and promote personnel exchange and training. By so doing the bilateral ties of S&T is expected to become more long-term focused, more stable and sustainable.

Source: Website of the Ministry of Science and Technology, April 12, 2016

China Vigorously Advances SKA Project

Yin Hejun, Chinese Vice Minister of Science and Technology met Philip Diamond, visiting Director General of the Square Kilometer Array Organization (SKAO) and representatives of some SKA member countries on March 7th 2016. Both sides reviewed the latest developments of the SKA project and exchanged ideas on present challenges and the organization's future plan.

Vice Minister Yin fully recognized achievements of the project and endeavors made by the SKAO. He noted that China plays an active and responsible role in the SKA and gives much attention and support to the founding of an inter-governmental organization to realize research goals of the SKA. China has been closely following the progress of relevant negotiations. He hoped the SKAO would keep in close contact with all member countries, coordinate positions of all sides to forge an effective synergy so as to enable smooth progress of the project.

Director General Philip Diamond commented that China has actively engaged in various SKA activities during the preparatory stage especially in the R&D of some work packages. The SKAO will take into full consideration suggestions of the Chinese side and work together with all parties to promote the transition of SKAO to an inter-governmental organization. The aim was to ensure the on-time delivery of the first stage of the SKA project. He also expressed confidence about the prospects of the SKA.

Source: Website of the Ministry of Science and Technology, April 14, 2016

Review of International S&T Cooperation over 12th Five-year Plan Period

During the 12th Five-Year Plan period, the bilateral S&T cooperation of China has seen significant progress. First, China has established the innovation dialogue and cooperation mechanism. Since the Sino-U.S. Innovation Dialogue Mechanism was formed in 2010, such mechanisms with other countries have developed vigorously to become an important basis for building mutual trust, resolving differences, and promoting common understanding and cooperation with developed countries and important regional economies like the U.S., EU, Russia, and Israel.

Second, S&T partnership programs have been set up. China has formulated S&T partnership programs with developing countries in areas like Africa, ASEAN and South Asia, engaging in practical cooperation in founding joint research institutions, building science parks and constructing data sharing platforms.

Third, China has co-sponsored joint projects. For instance, the U. S. will allocate over RMB60 million as a special fund for S&T cooperation with China each year. The U.S. Energy Secretary Moniz once remarked that the cooperation in clean energy between China and the United States has remained one of the most successful examples of international cooperation. With guarantee of funds, the two sides have successfully completed in 2011-2015 first-phase cooperation through the Clean Energy Research Center (CERC) in areas of clean coal, clean energy vehicles, and energy conserving buildings. In 2014, the two sides confirmed support for second-phase cooperation of CERC in 2016-2020, expanding to cover Energy and Water as new area of cooperation. In order to support S&T cooperation with China, the UK will appropriate a total of £100 million for cooperation with China under the framework of Newton Foundation in five years in 2014-2018. Besides, other countries have established or are trying to establish special funds for inter-governmental S&T cooperation with China, including Australia, New Zealand, Canada, Czech and Poland.

Fourth, China is playing an increasingly important role in multilateral S&T cooperation mechanism. According to data, China now has participated an array of mega-science projects and initiatives including ITER, SKA Telescope, and the 4th Generation Nuclear Energy Forum. The involvement in international mega-science cooperation projects not only cemented China's capabilities of basic scientific research, but also enhanced China's say role in the international scientific community. It has highlighted China's great role in addressing regional and global challenges, serving to cement China's image as a responsible big country in the world.

During the 12th Five-Year Plan period, China has made significant progress for core critical technologies in many areas including IT, material technology, and health and biotechnology through implementation of special projects under national initiative for international S&T cooperation. For instance, in the area of IT, we have designed low-altitude surveillance and meteorological detection multipurpose radar and the general aeronautic surveillance management system based on the radar through cooperation with the French Thales Group Aerial System Subsidiary. This provides systematic solutions for low aerospace that integrate low altitude safety surveillance, overall operation management and general flight data services.

Besides, in order to improve international cooperation of the region, a series of bases of international S&T cooperation have been accredited in succession around the country since 2006 so as to provide the platforms needed for implementing projects of international S&T cooperation. By the end of 2015, the total number of National-level Bases for International S&T Cooperation in China has reached 549 and the basic layout has taken

shape for platforms of international S&T cooperation and innovation at various levels and in various forms, promoting further participation of various regions in global S&T innovation cooperation.

Source: Science & Technology Daily, March 11, 2016

China Actively Engaged in International Mega-science Projects

During the 12th Five-Year Plan period, China has actively participated in international mega-science projects and initiatives, guiding and encouraging research institutions and personnel to engage in in-depth participation in international S&T organizations. This is meant to further promote cooperation with international organizations in areas like clean energy, environmental protection, international technology transfer, and policy research. So far, the important international mega-science projects in which China has participated include International Thermonuclear Experimental Reactor (ITER), International Continent Drilling Program (ICDP), Integrated Ocean Drilling Program (IODP), European Organization for Nuclear Research Large Hadron Collider (LHC), Square Kilometer Array Telescope (SKA), and the inter-governmental Group on Earth Observations.

Source: Science & Technology Daily, Mach 11, 2016

Progress of International Thermonuclear Experimental Reactor (ITER)

In mid-1980s, countries including the U.S. and France launched the ITER project. The mission is to build the world's first controllable thermonuclear experimental reactor in a bid to provide enormous clean energy for mankind. The ITER project is the first multilateral international mega-science project China has been involved as a member country. With the help of ITER organization and CNDA, the Applied Superconductor Engineering Center of Institute of Plasma Physics CAS has worked together with domestic partners to develop the vertical field coil conductor manufacturing technology and pass accreditation of industrial production. Also, they established and realized the satisfying quality management and process control system, having accomplished technology R&D of products, equipment research and manufacturing, and testing and quality assessment.

On May 29, 2009, the first conductor sample of Chinese side - TFCN1- passed testing of relevant international laboratory with excellent performance. On August 14, 2011, the project of toroidal field coil conductor as China's first batch of ITER parts was started and on October 4, 2015, the research team was working on the twisting of the last toroidal field coil superconductor cable and finished the final forming and winding procedure. By the end of 2015, the forming and winding of the last piece of conductor of the ITER Toroidal Field (TF) Coil Conductor Procurement Package had been successfully completed. This signified the success of production of the first ITER procurement package that China undertook, showing China has attained first-rate ranking in the world for research and industrial production of large superconductors. Regarding the TF procurement package, 100% domestic production for products has been realized with 100% satisfying quality of products and manufacturing and delivery as scheduled by the ITER project.

Source: Science & Technology Daily, March 11, 2016

Square Kilometers Array (SKA) Radio Telescope

In September 2012, China participated in the preparation for the Square Kilometer Array (SKA) project, engaging in all detailed activities of SKA. In 2008, the 54th Research Institute of China Electronics Technology Group Corporation was awarded the production contract of all the 36 antennas of ASKAP. This was also the first time for Chinese industry to undertake core R&D tasks in international mega-science projects, with substantial breakthroughs achieved in R&D of new and high technology of SKA. In October 2012, the project was completed and was confirmed and appreciated by foreign counterparts. Also, China's astronomical community has been engaged in research of SKA scientific goals and compilation of S&T white papers. Moreover, China is gradually playing a leading role in international negotiations. In March 2013, a tender invitation was issued for the R&D of preparatory stage of the SKA project, and through bidding the Chinese side was awarded the contract of six of the 10 R&D packages.

Source: Science & Technology Daily,
March 11, 2016