The first China Internet Civilization Conference opened in Beijing on November 19.

**Editor's Pick**

CSNS Makes Neutron Advances

By TANG Zhexiao

The China Spallation Neutron Source (CSNS) put into use in August 2018, is the nation's first research facility providing the most intense pulsed neutron beams for 345 scientific research projects. More than 90 percent of the equipment of CSNS is based on independent research and domestically produced.

Neutrons are small particles with no charge. By examining the roots of the neutron via a neutron microscope, researchers can deduce the internal structure of the material, thus conducting scientific research in fields of life science, material science, and modern energy.

As one of the largest scientific and technological facility projects in China, CSNS is expected to make a contribution to many areas of scientific research and applications.

**Three Approaches on the Way: Development of COVID-19 Drugs in China**

By Staff Reporters

A variety of medicinal applications developed by China have been successfully used in clinical treatment in the ongoing battle against COVID-19. With 98 percent reduction of hospitalization and deaths, the neutralizing monoclonal antibody combination therapy, BBIBP-COVID-19, developed by Tsinghua University, and Phase 1 clinical trials of the therapy, which was sponsored by the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), are being conducted in seven countries including the U.S., Brazil and the Philippines. It is also likely to be the first intervention to get emergency use authorization in developed countries such as the U.S.

By neutralizing the virus, the therapy can improve the safety of patients, which is a critical factor in minimizing the effect of the disease.

**China-ASEAN Cooperation Boosts Vitality**

By Staff Reporters

China and the Association of Southeast Asian Nations (ASEAN) have established a comprehensive strategic partnership. President Xi Jinping declared on November 22 while chairing the ASEAN-China Special Summit to commemorate the 30th Anniversary of ASEAN-China Dialogue Relations via video link: Xi said the valuable experience of China-ASEAN cooperation over the past 30 years should be cherished and upheld over the long term.

Over the past three decades, China and ASEAN have remained committed to unity and good faith, mutual benefit and win-win results.

Since the outbreak of the pandemic, China and ASEAN members have fostered cooperation on curbing the spread of COVID-19. China has provided ASEAN member states, including Cambodia, Laos, and Myanmar, with more than 300 million doses of COVID-19 vaccines and a great number of emergency medical supplies, and has also sent medical experts to help build virus-testing labs and work on vaccine trials with several ASEAN countries.

Chinese Foreign Minister Wang Yi said that China will continue to provide valuable support to ASEAN countries until the pandemic is completely defeated.

Bilateral trade between China and ASEAN, its largest trading partner, reached a 66 trillion RMB (about 9.4 trillion USD) in the first half of 2021, up 28.7 percent year on year, according to data from China Customs.

At the beginning of China’s cooperation project on opening up to ASEAN, Guangxi Zhuang Autonomous Region, which borders Vietnam, has seen its trade boom with imports and exports in cross-border e-commerce surpassing 9.6 percent per year on year from January to July this year.

In addition, under the guidance of the Ministry of Science and Technology, China has pioneered a new mode of technology transfer, establishing a China-ASEAN technology transfer cooperation network covering ASEAN countries. This has given a strong boost to the cooperation between China and ASEAN countries in scientific and technological innovation.

**CSNS Successfully Made Their Target of Neutrons**

CSNS successfully made their target of neutrons, a neutron source, in three years. The other three are in Beijing, Shanghai, and Guangxi.

CSNS is expected to make a contribution to many areas of scientific research and applications.

**Neutrons Microscopic View**

Combining the spallation source for one neutron source into the spallation neutron source for one RMB. To build China’s first spallation neutron source, the CSNS team took the challenge with an efficient approach.

Chen, who has undergone heart surgeries before, was nevertheless on hand to lead his team through the technological and engineering difficulties. CSNS successfully made their target of neutron source and declared it a success.

**The World's Fourth Spallation Neutron Source:**

The world's fourth spallation neutron source comes from electricity. "According to the test results, the amount of radiation received by residents who live near the spallation neutron source for one year is equivalent to taking a long-haul fight," said Chen.

Chen said that this is one of the biggest scientific and technological facility projects in China, CSNS is expected to make a contribution to many areas of scientific research and applications.

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Two Million Highly Skilled Personnel to be Available by 2025

By ZHONG Jianli

China aims to keep the number of students at technical schools above 3.6 million and to train more than 2 million highly skilled personnel during the 2023-2025 period, according to a five-year plan issued by the Ministry of Hu-
man Resources and Social Security. Titled the "Five-Year Plan (2023-2027) for Education of Skilled Personnel," the plan also sets the goal to provide more than 20 million vocational training sessions to enterprise employees and key employment groups by 2025.

To reach these goals, the plan pro-
poses a series of measures in the follow-
ing aspects:

- Select 30 high-quality technical schools and 300 majors to give full play to their exemplary role to build distinctive brands of technical ed-
ucation.

- Encourage all sectors of society to establish schools for technical edu-
cation. Leading and large enterprises should play their essential role in run-
ing these schools. Privately run techni-
cal schools will be encouraged and sup-
ported.

- Explore the formation of regional sci-
colleges and regional vocational training alliances, and build about 100 of them.

- China has said the country will sup-
pport and guide technical schools in building a group of special majors that are in line with the national strategic needs and the development of local lead-
ing industries. Priority will be given to developing a number of emerging majors that are needed in advanced manufactur-
ing, new energy, new materials, modern agriculture, modern information tech-
nology, biotechnology, and artifi-
cial intelligence.

It also proposes to speed up the de-
velopment of much-needed majors, such as nursing, health care, and house-
keeping, upgrade traditional majors in iron and steel metallurgy, chemical mol-
ecules, organic materials, and manufac-
ture, and remove or combine majors where graduates have low employment rates. Technical schools are encouraged to develop more majors that are market-
based and demand-driven, and to closely connect industrial and innovation chains.

As of the end of 2020, China had 2,443 technical schools. Apart from de-
vocational technical schools and voca-
tional colleges, China has also provided vocational training programs in other de-
veloping industries. The plan proposes a series of measures in the follow-
ing aspects:

- China has agreed to implement the action plan for carbon peaking, un-

- Young talented people from across the world are welcome to visit and study in Japan, according to Okimura.

- Shandong province and Japan are in close proximity across the sea and their industry and supply chains are highly complementary, with huge space for cooperation and close economic and trade exchanges.

- The project manages to generate energy from floating photovoltaic and sea-water resources simultaneously or alter-
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- Zhan Guoqing, director of Department of Science and Technology of Shandong Province (Technology of Shandong Province) (Image 351x233 to 673x400)
**The Metaverse: Creating a New Reality**

By QL Liming

In a different kind of matchmaking, international experts and entities gathered at the Technology Diplomats’ Innovation Resources Matching Action 2021 (Matching Action 2021) on November 18, aiming to build platforms and expand cooperation online and is the current buzzword.

The rapid expansion of railways promotes more exchanges, and also does a great job cutting greenhouse gas (GHG) emissions.

Another major advantage of the high-speed rail is that it takes a step towards environmental conservation. According to the scheme of the construction of the bridge, it is also China’s first cross-sea high-speed rail cable-stayed bridge with low towers. The Meizhou Bay cross-sea bridge is one of the major parts of the 272 km-long Fuzhou-Xiamen HSR. With a design speed of 350 km per hour, the HSR is expected to cut the travel time between the provincial capital Fuzhou and the tourist city of Xiamen to under an hour.

According to the International Railway Journal, the two countries under the first China Railway Rolling Stock Corporation electric multiple units and electric multiple units on the line linking Laos’ capital Vientiane to Kunming, China, the line was completed on October 16 with opening date planned for December 2 for both freight and passengers.

**The Challenge of Building High-Speed Rail with Green Vision**

The team used the CRISPR/Cas 9 gene editing technology to study the genes involved in aging and longevity. By Staff Reporters

By Staff Reporters

Chinese scientists recently found a gene, which could partially "crack the human aging code." A research team from the Institute of Zoology at the Chinese Academy of Sciences (CAS), is exploring the genetic information hidden in the human genome that induces cell senescence, hoping to suppress the aging of cells through genetic interventions.

"During the aging process, inactive repetitive sequences in genomic, such as the LINE-1 and the Alu family, which makes up more than 50 percent of the human genome is a key factor in intragenic and intergenic recombination, leading to genomic instability and cancer," said Lin Guangrui, a research team member.

The team used the CRISPR/Cas9 method to disable these repeat elements, which can lead to genomic instability and cancer. By Staff Reporters

"Hi! Tech Inactivated KAT7 Gene Could Delay Aging"
A Biological’s Never-ending Passion for New Discoveries

by Long Yun

Eight years ago, Ben-Daer Yaacov, a renowned Canadian medical scientist, moved to China with the hope of discovering a cure for cancer using a combination of Western and traditional Chinese medical practices. On September 30 of this year, Yaacov received the Chinese Government Friendship Award for his scientific contribution in China. He was regarded as more respected for his scientific contribution in China than probably most Chinese have.

Yaacov has visited the deserts near Urumq in the west, the frenzied city of Xian in the north, and the beautiful rural areas of Hainan in the south. He has seen the pandas in the Chengdu Research Base, Gorges Dam on the Yangtze River, the ancient towers and beautiful parks. He feels like family to me. As they say, “Home is where the heart is” and to get to know my family, I have discovered my family's new home. We have far more in common with the Chinese people than we have different.

I have had the privilege of having 5 of my former Xi Shi students to visit me and my family in the United States. They feel like family to me. As they say, “Home is where the heart is” and to get to know my family, I have discovered my family's new home. We have far more in common with the Chinese people than we have different.

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Youyou, who won Nobel Prize in medicine for her research on malaria, said in a press conference on October 11: “Here I have access to everything new and locally grown. I learned to love the Chinese people, their culture and food. It was a wonderful experience to be exposed to so many wonderful, kind and helpful people. I still remember my students by name. I remember the kind lady who taught me Chinese. I learned that even though our politics may be different, our people are the same.

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China has expanded vaccine inoculation, with booster shots in particular, to residents free of charge. Wang Huaqing, chief expert on immunology of the China National Immunization Program, said in a CCTV interview on November 15 that China has expanded vaccine inoculation, with booster shots in particular, to residents free of charge. He said: “We expanded vaccine inoculation, with booster shots in particular, to residents free of charge. We also noted that according to the Chinese government's prevention and control, the priority groups of booster shots had been identified, including workers in high-risk industries, elderly people, persons with disabilities and immunocompromised individuals.

In addition to these groups, localities can also expand the scope of booster shots for local residents based on local conditions and needs for COVID-19 prevention and control, and provide optional immunization services to other eligible people who need booster shots.

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