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WEEKLY EDITION

BRST Strengthens Sci-tech Ties Among BRI Partners

By BI Weizi

Chinese President Xi Jinping sent a congratulatory letter to the first Belt and Road Conference on Science and Technology Exchange (BRST) that opened in Chongqing city in southwest China on November 6. He noted that the third Belt and Road Forum for International Cooperation was successfully held, ushering in a new stage of high-quality development for the Belt and Road Initiative (BRI), of which sci-tech cooperation is an important part.

Themed "Together for Innovation, Development for All," the two-day conference focused on intergovernmental cooperation in science and technology, people-to-people exchanges in science and technology, industrial innovation and development and paradigm shift in scientific research. Future medicine, open science and big data were also on the agenda. It was attended by 800 participants from around 80 countries and international organizations.

Jakab István, deputy speaker of the Hungarian National Assembly, said Hungary was the first EU country to join the BRI and has been an unwavering supporter of its mission. "Besides trade, joint research between the two sides is also booming, covering areas as diverse as automobiles and batteries, water treatment and thermal energy technology, smart agriculture and green industry," he said.

Mongolia's minister of education and science, Enkh-Amgalan Luvsantseren said Mongolia recognizes the importance of regional cooperation, and joint efforts from various parties are needed to address the complex global problems.

The minister proposed strengthening the Mongolia-China partnership to promote common development and progress.

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The Matrix 1 manned electric vertical take-off and landing vehicle developed by a Chinese company makes its debut at the sixth China International Import Expo held in Shanghai from November 5 to 10, 2023. (PHOTO: XINHUA)

Editor's Pick

Quantum Tech: China's Scientific Pride

By LIANG Yilian

Chinese physicist Xue Qikun was awarded the 2024 Oliver E. Buckley Prize by the American Physical Society on October 24. This marks the first time a Chinese scientist has won the top prize in condensed matter physics since the award was founded in 1953.

Xue received the award for his research on topological insulators and innovative breakthroughs in experimentally discovering the quantum anomalous Hall effect (QAHE) in a magnetic topological insulator.

This significant achievement and a series of breakthroughs Chinese scientists made in recent years in the quantum field, show that the country's quantum technology ranks among the best in the world.

Catching up, qubit by qubit

Quantum computing is based on the

principles of quantum mechanics and qubits. In September 2019, Google launched a 53 qubit computer called Sycamore, which took only 200 seconds to calculate a mathematical algorithm. At that time the world's fastest supercomputer Summit took two days to do the same task, and the U.S. took the lead in achieving "quantum supremacy."

A year later, China successfully developed the 76-photon quantum computing prototype "Jiuzhang," which solved the mathematical algorithm Gaussian Boson sampling in just 200 seconds, compared to 600 million years for the world's fastest supercomputer at the time. This made China the second country in the world to achieve "quantum supremacy."

Now, Jiuzhang 3.0 is able to solve a Gaussian Boson sampling problem ten quadrillion times faster than Frontier, the

world's current most powerful supercomputer.

"If you look at the West — the U.S., Europe — there haven't been a lot of people talking about repeating [Google's 2019] experiment," John Martinis, a former Google researcher who led the team to build Sycamore, told Scientific American, adding "I admire, in China, that they want to do this seriously."

"In the three major fields of quantum, we are among the top in all aspects. China's quantum computing ability used to be relatively backward, but now it has caught up," Guo Guangcan, academician of the Chinese Academy of Sciences (CAS) told Xinhua.

Quantum tech leader

From "Jiuzhang" to "Jiuzhang 3.0," and from "Zuchongzhi" to "Zuchongzhi 2," China's quantum technology is gaining momentum.

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Bond of Sino-Canada Medical Cooperation

By ZONG Shihan

Eighty-five years ago, Norman Bethune, a Canadian doctor, built a bridge of friendship between China and Canada through his selfless spirit. Today, the Bethune Medical Development Association of Canada (BMDAC) continues to carry this spirit and deepen medical cooperation between the two countries.

Honoring Bethune's spirit

Canadian cardiac surgeon Dr. Lee Errett told *Science and Technology Daily*, "My Chinese colleagues in Canada said that they need help because China is developing rapidly and needs some guidance. I've been interested in this sort of work for a long time, so I came."

On his first arrival in China in 1999, Errett found that China needed to do a

lot of work in medical infrastructure construction and education development. "If we were more organized, we could take larger groups, not just cardiac surgery, and could solve more medical problems," said Errett. Hence, a more organized group, the BMDAC, was established in Canada in 2011.

Since its establishment, the BMDAC has organized 19 trips to China for free medical consultations, providing treatment in excess of 1000 patients, completing more than 500 surgeries, and holding no less than 600 academic lectures.

At the same time, the association also arranged for over 140 Chinese doctors to go to Canada for short-term studies. Even during the COVID-19 pandemic, the association still managed to organize 26 online medical lectures.

In addition, the BMDAC organized a campaign to donate urgently needed medical supplies such as ECMO (extracorporeal membrane oxygenation) and masks to the Wuhan medical team. During the severe pandemic situation in Canada, it also received various stocks of medical supplies from China, which were promptly distributed to hospitals, clinics and nursing homes across Canada.

Errett believes that BMDAC's medical journeys in China and exchanging epidemic prevention supplies, have truly followed the spirit of Bethune.

Promoting medical exchanges

With the support of the Ministry of Science and Technology and the Ministry of Human Resources and Social Security, the BMDAC resumed its operation in China after a three-year pause. See page 3

CIIE: A Public Good for Whole World

By LI Linxu

Under the theme of "New Era, Shared Future," the 6th China International Import Expo (CIIE) kicked off in Shanghai on November 5.

In his letter to the 6th CIIE, Chinese President Xi Jinping said that the annual expo has leveraged the strengths of China's enormous market, fulfilled its platform function for international procurement, investment promotion, people-to-people exchanges and open cooperation, and made positive contributions to creating a new development pattern and promoting world economic development.

For the first time since COVID-19, all CIIE events are once again being held physically. A total of 289 Fortune 500 companies and industry leaders are taking part in this year's expo.

"The CIIE sends a clear signal to the world, that is, China's open door will continue to widen," Jean-Christophe Poinseau, president of Pfizer China, told *Science and Technology Daily (S&T Daily)*, adding that Pfizer has witnessed the rapid development of the Chinese market, and no multinational company is willing to give up the opportunities in the Chinese market.

Thanks to the CIIE, more and more foreign companies can tap the vast Chinese market made available by China's high-level opening up.

"The CIIE is a unique platform for Zeiss to engage with all stakeholders including customers, researchers, and policy-makers," Zhang Yuxin, vice president of Zeiss Greater China, told *S&T Daily*, adding that Zeiss has been in the Chinese market for decades, and is committed to growing with China.

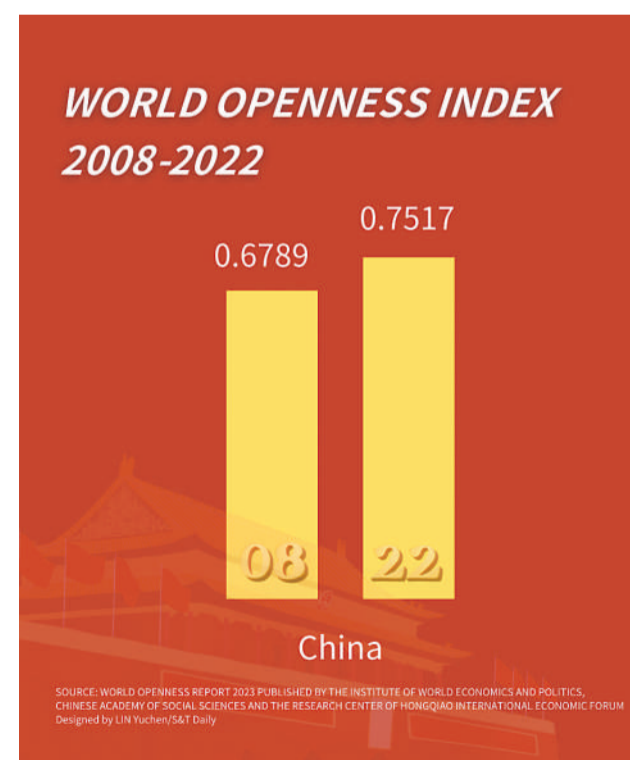
"Over the past six years, the CIIE has evolved into a key platform for enhancing global trade and a driver of win-win cooperation opportunities," said Jakob Stausholm, Rio Tinto's chief executive. He told *S&T Daily* that Rio Tinto is actively utilizing this platform to drive high-level and professional dialogues, and explore new opportunities.

"The CIIE is not only a platform to showcase our cutting-edge technologies, but also to build bridges with companies in China," Lorenzo Simonelli, chairman and CEO of Baker Hughes, told *S&T Daily*.

"The CIIE has helped us increase our visibility in China and strengthen our cooperative relations with partners," Dauter Oliveira, Vale's Asian development director, said to *S&T Daily*, adding that China's opening up also helps accelerate the spread of technology and knowledge, enhancing the innovation and competitiveness of multinational companies.

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New Graphic



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