科技日報

Science and Technology Daily

VOL.5-NO.220 DECEMBER 13-14, 2025


SCIENTISTS DISCUSS FUTURE OF SCIENCE AND AI

PAGE 2 | FOCUS


GREEN DEVELOPMENT IN CHINA RESHAPES THE WORLD

PAGE 4 | LIFE IN CHINA

## Innovation Pathway

# China Holds Central Economic Work Conference to Plan for 2026

The annual Central Economic Work Conference was held in Beijing from Wednesday to Thursday as Chinese leaders decided priorities for the economic work in 2026.

Xi Jinping, general secretary of the Communist Party of China (CPC) Central Committee, Chinese president and chairman of the Central Military Commission, delivered an important speech at the conference.

In his speech, Xi reviewed the country's economic work in 2025, analyzed the current economic situation and arranged next year's economic work.

It was noted at the meeting that 2025 is a truly extraordinary year, and the main targets for economic and social development will be successfully achieved.

As the 14th Five-Year Plan (2021-2025) is set to approach a successful conclusion, the meeting noted that over the past five years, China has effectively navigated various shocks and challenges, and achieved new major accomplishments in the cause of the Party and the country.

It is necessary to fully tap the economic potential, continue to pursue both policy support and reform and innovation, ensure both market vitality and effective regulation, combine investment in physical assets with investment in human capital, and respond to external challenges by strengthening internal capabilities, the meeting said.

Noting that there are still long-standing and new challenges in China's economic development, and the impact of changes in the external environment has deepened while risks and hidden dangers persist in some key areas, the meeting said that these issues can be resolved through efforts, and the underlying conditions and fundamental trends sustaining China's long-term economic growth remain unchanged.

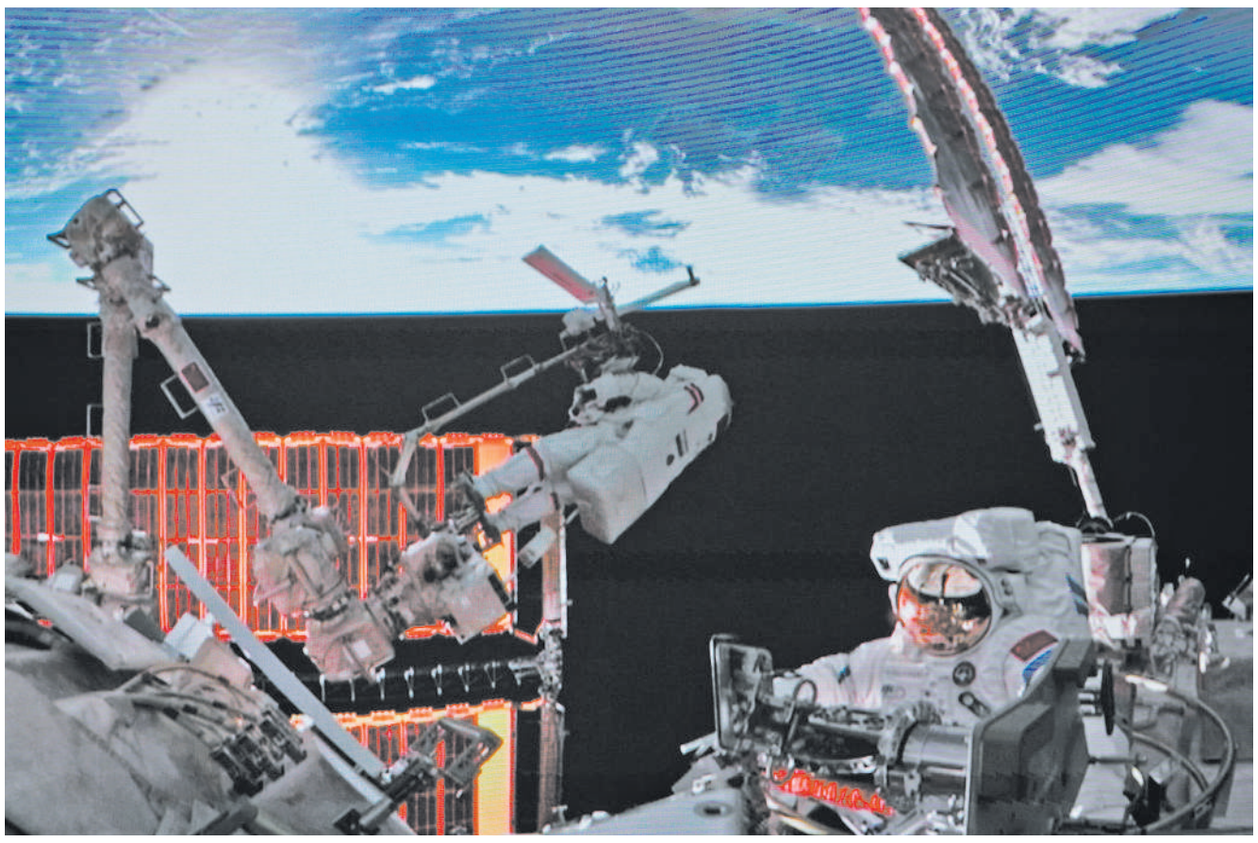
The conference stressed the need to fully and faithfully apply the new development philosophy, move faster to forge a new development paradigm and focus on promoting high-quality development.

China will adhere to the general principle of pursuing progress while ensuring stability, better coordinate domestic economic work with struggles in the international economic and trade arena, and ensure both development and security.

*See page 3*

## New Graphic


WECHAT ACCOUNT E-PAPER



This screen image captured at Beijing Aerospace Control Center on December 9, 2025 shows Shenzhou-21 taikonauts Zhang Lu and Wu Fei (R) performing extravehicular activities outside China's orbiting space station. (PHOTO: XINHUA)

# Energy Cooperation Gets New Direction

By Staff Reporters

Chinese President Xi Jinping sent a congratulatory message to the 7th China-Russia Energy Business Forum in Beijing on November 25, sparking enthusiastic responses from various sectors in both countries.

Many noted that President Xi's message highly commended the positive role of China-Russia energy cooperation in promoting the economic and social development of both nations and enhancing the well-being of their peoples.

The message provided important guidance for enterprises to advance practical cooperation, charted the course for establishing a new, all-round, multi-dimensional energy cooperation framework, and injected greater certainty into the global energy market.

Also on November 25, Russian President Vladimir Putin sent a congratulatory letter to the forum.

Igor Sechin, executive secretary of the Russian Presidential Commission for Strategic Development of the Fuel and Energy Sector and Environmental Security and CEO of the Rosneft Oil Company, expressed his gratitude to President Putin and President Xi for their support and ongoing personal attention paid to the development of bilateral energy cooperation.

According to Sechin, President Xi once said the rice bowl of energy must be firmly held in our own hands. Today, China has become a renowned world leader in renewable energy.

In recent years, China has commissioned the highest volume of new renewable generation capacity, and now hosts over 70 percent of the world's manufacturing capacity for green economy equipment. The synthesis of Russian resources and Chinese technological platform reliably ensures the stable development of the two economies, taking into account the priorities of domestic consumption.

Sechin noted that in the coming years, global economics will go through profound and complex changes. "Deepening our strategic cooperation is the key to countering these global challenges."

Meanwhile, Russian Deputy Prime Minister Alexander Novak said the congratulatory letters from the two heads of state, had filled them with confidence in the steady deepening of bilateral energy cooperation.

As President Xi noted in his message, China-Russia energy cooperation got off to an early start and has a solid foundation, and it serves as a model of mutually beneficial cooperation between the two sides.

Novak observed that energy cooperation between Russia and China is consistently strengthening, enriched with new dimensions, and transforming into a genuine strategic alliance, most notably in the oil, gas, and coal sectors.

"I am confident that integrating the efforts of our two nations in both traditional and new energy will ensure the sustainable development of our economies and create a technologically balanced energy landscape for the long term," said Novak.

*See page 3*

## International Cooperation

# Steel Tech Collaboration Forges China-Serbia Friendship

By LI Linxu

"The China-Serbia partnership is like the finest steel — resilient, adaptable, and ever-strengthening under the tempering of shared vision." This is how Serbian Ambassador to China Maja Stefanović described the China-Serbia friendship in an interview with *Science and Technology Daily*.

The China-Serbia Sci-tech Exchange Event and Young Talented Scientists Roundtable on Green Steel Manufacturing, themed "Empowered by Technology, Greening the Future," was held in Shijiazhuang, Hebei province, on December 9, demonstrating the deepening collaboration and talent exchanges between the two nations.

"China and Serbia share highly compatible needs and vast cooperation potential in technology and industrial development, particularly in green steel manufacturing," Gao Xiang, director general of China Science and Technology Exchange Center, said.

"Sci-tech cooperation platforms, such as Belt and Road labs and innovation centers, have integrated R&D from universities and industry-driven demands of enterprises," Gao added, citing the China-Serbia Belt and Road Joint Laboratory on Green Steel Manufacturing as an example. These partnerships span joint R&D, industrial cooperation, and talent exchanges, injecting sci-tech momentum into the green transformation of both countries' steel sectors.

Statistics show that China has become Serbia's largest source of foreign direct investment. Notably, Serbia's top three exporters are Chinese-invested enterprises, including HBIS Serbia.

"HBIS Serbia has not only built one of the most advanced steel plants in Europe, but also created job opportunities for thousands of Serbian families," Stefanović said. "The joint lab serves as another testament to our ironclad friendship, injecting greater innovative momentum into Serbia's green and sustainable development."

The event and roundtable, part of the 2025 China-CEEC InnoShare, attracted more than 100 participants from China and Central and Eastern European countries.

"Hebei's steel industry development relies on open innovation cooperation," said Long Fenjie, director general of Hebei Provincial Department of Science and Technology.

*See page 2*

## STI Frontier

# Long High-pressure Steel Pipes Now Homegrown

By Staff Reporters

In a petrochemical plant, ultra-high-pressure steel pipes are a vital component, essential for transporting petroleum, natural gas and chemical materials.

In the past, the manufacturing technology of ultra-high-pressure steel pipes over 10 meters in length was monopolized by foreign countries. However, times have changed after a Chinese company broke this bottleneck, and independently developed the 17-meter-pipe along with the capacity of mass production.

***Purity of raw materials***

It took 13 years to develop this 17-meter-long steel pipe, said Zhou Zhongcheng, chief engineer of the Inner Mongolia North Heavy Industries Group Co., LTD. (NHIG).

Back in 2012, the company took up the challenge of making the 17-meter long ultra-high-pressure steel pipes. Before that, it had already acquired the technology to manufacture 10-meter steel pipes.

For every additional meter, the manufacturing difficulty doubles. Zhou explained that if the length of the steel pipe increases significantly, the combined stress generated by its own weight and internal high pressure rises sharply, which requires a higher purity of raw materials.

Elements such as sulfur, phosphorus and oxygen in steel will all affect its compressive strength and uniformity. Eliminating these elements is the key to improving the purity of steel. However, oxygen is extremely difficult to remove.

The research team finally figured out a combined method. They added elements such as silicon and calcium to the molten steel to form stable oxides with oxygen. After these oxides float up, the oxygen element can be easily removed. To prevent oxygen from finding a way in during the process, the team also introduced argon gas to prevent secondary oxidation, achieving deep refining and purification of steel.

*See page 4*

## WEEKLY REVIEW

***Chinese Researchers on Nature's 2025 Influential List***

Liang Wenfeng, founder and CEO of the Chinese AI firm DeepSeek, and "deep diver" Chinese geoscientist Du Mengran are on the annual "Nature's 10" list, which highlights 10 people at the heart of some of the biggest science stories of 2025.

***New Electrolyte for Aluminum Batteries Developed***

Tianjin University's Advanced Carbon and Energy Materials Laboratory has developed a non-corrosive organodichloro electrolyte, clearing a major obstacle for large-scale application of aluminum batteries. The work was published in *Nature Sustainability*.

***Chip Moves Tiny Objects Using with Acoustic Waves***

Virginia Tech scientists have created a programmable chip that uses acoustic waves as invisible grabbers to manipulate fluid flows and tiny particles. The acoustic wave chip has significant potential in the medical and engineering fields.

***RNA Drug Shows Promise for Repairing DNA***

Scientists at California's Cedars-Sinai have created an experimental medication that can help repair damaged DNA. The drug, called TY1, represents an early example of a new group of treatments aimed at restoring tissue harmed by heart attacks, inflammatory disorders or other medical conditions.

Address: No. 15, Fuxing Road, Haidian District, Beijing, 100038. Telephone: 010-58884083 Price: 4.00 RMB **Visit: www.stdaily.com/English/index.shtml**
国内统一连续出版物号:CN11—0319 邮发代号:81—97 **Submit your article to: stweekly@stdaily.com**