



# Science and Technology Daily

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## Observer

### Future Industries: From Niche Innovation to Ecosystem Building

By LONG Yun & FANG Linlin

In 2025, China's core artificial intelligence (AI) industry was valued at more than 1.2 trillion RMB, with the number of AI companies surpassing 6,200, according to Li Lecheng, minister of industry and information technology. Additionally, China ranked first worldwide in downloads of open-source AI models over the past year. By the end of 2025, more than 30 percent of manufacturing enterprises above the designated size had adopted AI technologies, while Chinese companies had released over 300 humanoid robot products.

Highlighted during the recently concluded fourth session of the 14th National People's Congress and the fourth session of the 14th National Committee of the Chinese People's Political Consultative Conference (hereinafter referred to as Two Sessions), these figures sent a message to the world: China's industrial innovation is accelerating from "leading in specific tracks" to "forming a robust ecosystem." This shift has drawn significant attention from the international community.

With AI as the core engine, China's emerging industries and industries of the future are undergoing a critical transformation, moving from technological exploration and early applications to substantial breakthroughs characterized by scaled deployment, accelerated industrialization, and global expansion.

This trend was demonstrated at the 2026 Mobile World Congress (MWC) in Barcelona, Spain. In the China pavilion, telecom operators and IT giants showcased intelligent robots and innovative terminals powered by the latest large models, attracting crowds of global attendees. As reported by South Korea's *Chosun Daily*, "China stole the spotlight at this year's MWC," while on-site comments said, "MWC (Mobile) has become 'CWC (China)'."

*The New York Times* noted a distinct strategic divergence: "Chinese tech companies have focused intensely on real-world applications for AI. By contrast, many leading American tech companies have been focused on more abstract goals, like developing the most cutting-edge model, or achieving artificial general intelligence." *See page 4*



An aerial drone photo taken on March 14, 2026 shows the large cruise ship "Adora Flora City" in Shanghai, east China. As China's second domestically built large cruise ship, it is expected to be delivered by the end of 2026. (PHOTO: XINHUA)

## STI Frontier

### High-Altitude Sentinel in Global Climate Fight

Edited by WANG Xiaoxia

On the peak of Mount Waliguan in northwest China's Qinghai province, at a windswept altitude of 3,816 meters, an unassuming scientific outpost is quietly shaping our understanding of the planet's health. This is the China Global Atmosphere Watch Baseline Observatory that has been monitoring the Earth's temperature for over 30 years.

A great contribution of the observatory is the "Waliguan Curve" — a long-term, consistent record of atmospheric carbon dioxide concentrations.

**A station forged in extremes**  
As the highest baseline observatory in the hinterland of Eurasia, its long-term observational data are incorporated into the World Meteorological Organization's Greenhouse Gas Bulletin and international climate assessments, becoming an important scientific basis for characterizing global climate change trends.

But keeping this vital data stream alive is a story of extraordinary dedication. Building the Waliguan observatory in the 1990s was a logistical challenge, requiring materials to be hauled from 140 kilometers away and water trucked up the mountain.

Today, life for the three generations of scientists who have manned the station remains incredibly tough. Oxygen concentration here is just 67 percent of that at sea level, temperatures regularly plunge to -20°C, and winds can reach hurricane-force levels, equivalent to extreme typhoons or hurricanes. Yet, the dedicated staff must still check sensitive equipment every two hours, ensuring the data remains long-term, continuous and precise.

**From a single peak to a green ripple effect**

Recognizing that even minor local pollution could have an impact on the observatory data, China is taking extraor-

dinary steps to protect the observatory's surrounding environment.

Starting from February 1, 2026, a new local law will formally safeguard the area around Waliguan, integrating its protection into regional development plans. This legal shield ensures that the "Waliguan Curve" will continue to provide reliable data for scientists worldwide.

The commitment to Waliguan reflects a broader, tangible shift towards sustainability. To the east of the station, the once-barren Talatan Gobi Desert has been transformed into a massive solar farm. The 609 km<sup>2</sup> photovoltaic park stretches like a "blue ocean," where an endless expanse of photovoltaic panels now generate clean energy. In 2025 alone, the Hainan Tibetan autonomous prefecture in Qinghai, where the photovoltaic park is located, saved an estimated 17.17 million tons of coal equivalent.

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### 6G Development in Critical Phase

By Staff Reporters

China is accelerating its R&D of 6G technology, a topic discussed by policymakers and industry experts at the recently held fourth session of the 14th National People's Congress (NPC) and the fourth session of the 14th National Committee of the Chinese People's Political Consultative Conference. With key technological breakthroughs having been made, China is now entering the phase of integration of technical solutions and development of prototype machines.

The technology is explicitly named in this year's government work report as a key industry of the future to develop,

alongside quantum technology, embodied AI and brain-computer interfaces.

**From connecting to sensing**  
"6G represents far more than faster speeds; it's a leap from simple connection to ubiquitous sensing and intelligent services," said Miao Wei, a deputy to the NPC and senior vice president at ZTE Corporation.

Identified in the International Telecommunication Union's "IMT-2030 framework," 6G is expected to improve upon nine existing capabilities and bring six new capabilities, including sensing-related capabilities and applicable AI-related capabilities.

"The network will be ubiquitous, as

will computing power and intelligence," explained Shao Chunju, researcher from China Mobile Research Institute. She envisions authorized devices like robot assistants collaborating on tasks such as scheduling or home care. Holographic communication for individual users and advanced real-time monitoring for smart factories will also be possible.

The development of 6G will directly drive the accelerated growth of cutting-edge industrial chains such as satellite Internet, intelligent metasurfaces and quantum communication, according to Professor Zhang Ping from Beijing University of Posts and Telecommunications.

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## International Cooperation

### Tech Empowers Lancang-Mekong Cooperation

By WANG Xiaoxia

As the Lancang-Mekong Cooperation (LMC) mechanism, initiated by the six countries of the region in 2016 to build a community with a shared future of peace and prosperity, marks its 10th anniversary, regional science and technology innovation cooperation has improved vastly. Multiple fields show substantive results, including aerospace, agriculture, water resource management and digital technology.

China continues implementing the Lancang-Mekong Space Cooperation Plan with Mekong countries. It launched the "Fudan-1 Lancang-Mekong Future Star" in 2024, and supported Fudan University in establishing the Research Center for Lancang-Mekong Youth Astronomical Sciences, an important platform for the six countries for exchange and cooperation in space observation and technology application.

Chinese agricultural technology has contributed to poverty reduction and industrial transformation in the region.

For example, the Spice and Beverage Research Institute of the Chinese Academy of Tropical Agricultural Sciences (CATAS) has collaborated with the Lancang-Mekong Agricultural Cooperation Center to promote disease-resistant cultivation techniques in Cambodia, which increased the local pepper production by over 22 percent and annual income of farmers by 1,000 USD. This project was listed as one of the global best poverty reduction practices.

The Rubber Research Institute of CATAS, cooperating with institutions from Mekong countries, has launched a demonstration project on rubber tree cultivation and processing techniques to reduce environmental pollution and damage to trees while helping upgrade the regional rubber industry.

The sustainable management and utilization of water resources is another important cooperation field. The six countries have established the Lancang-Mekong Water Resources Cooperation Center and an information sharing platform, applying advanced technologies for climate change mitigation and adaptation, disaster management, hydrological data monitoring and sharing, and water-related infrastructure construction.

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## WEEKLY REVIEW

### Shenzhou-21 Crew Completes Second Series of EVAs

Astronauts from the Shenzhou-21 mission aboard China's orbiting space station carried out the second round of extravehicular activities (EVAs) on March 16. According to the China Manned Space Agency, their tasks included installing a space debris protection device on the station, along with additional operations.

### Scientists Find New Stem Cell Treatment for Type 1 Diabetes

A Shanghai-based research team has treated three patients with type 1 diabetes by using endoderm stem cell-derived islet-like tissues (E-islet) to restore their pancreatic islet function, potentially providing a new treatment option for millions of people worldwide. The study was published in *The Lancet Diabetes & Endocrinology*.

### Researchers Develop Ultra-fast Data Processing Method

A study published in the journal *Nature Photonics*, carried out by researchers from Politecnico di Milano and other international institutions, found that ultra-short light pulses can carry out logical operations at frequencies exceeding 10 terahertz — more than 100 times higher than the most advanced electronic devices available today.

### 2025 ACM A.M. Turing Award Announced

The Association for Computing Machinery (ACM) has named Charles H. Bennett and Gilles Brassard as the recipients of the 2025 ACM A.M. Turing Award for their essential role in establishing the foundations of quantum information science and transforming secure communication and computing.

### New Graphic

IN THE FIRST TWO MONTHS OF 2026

#### SALES REVENUE OF HIGH-TECH INDUSTRIES

↑ 16.1% y-o-y

#### SALES OF HIGH-TECH SERVICES

↑ 17.2% y-o-y

Source: China's State Taxation Administration  
Designed by SONG Ziyan / Science and Technology Daily

WECHAT ACCOUNT

E-PAPER

