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Favorable Financial Services to Boost Innovation

By Staff Reporters

The boom in China's sci-tech innovation owes a great deal to targeted and continuous financial assistance, which has nurtured the sector.

A recent example of that is the set of guidelines issued by seven authorities on May 14. The guidelines include 15 measures to promote financial services for sci-tech innovation, including services to boost venture investment, credit supply and insurance support. The goal is to accelerate the establishment of a financial service mechanism that will support high-level self-reliance and strength in science and technology.

According to the document, the authorities including the Ministry of Science and Technology (MOST), the People's Bank of China (PBOC), and the National Financial Regulatory Administration (NFRA) will coordinate policy tools to provide better financial services for sci-tech innovation. They will guide long-term capital, patient capital and quality capital into this field, and enhance financial services for enterprises that undertake major national sci-tech tasks, and for technology-based small and medium-sized enterprises (SMEs).

The guidelines were formulated based on the successful attempts by local governments and financial institutions in recent years. For example, initiated by the Science and Technology Bureau of Hefei city in Anhui province, the Anhui Xingtai Financing Guarantee Group Co. and several banks jointly launched a special guarantee for loans related to sci-tech innovation. This has helped over 250 enterprises obtain bank financing amounting to over 660 million RMB.

The measures aim to meet the urgent needs and address the structural contradictions in the current financial system, said Zhang Junfang, a researcher at the Institute of Science and Technology Strategy of China.

SMEs find it hard to obtain financial support because it is difficult to transform their intellectual properties into the collateral assets recognized by banks' credit assessment system, said Liang Bing, founder of Scienx, an ecological technology company based in Nanjing, Jiangsu province. *See page 2*



A Long March-2D carrier rocket is launched from the Jiuquan Satellite Launch Center in northwest China, on May 14, 2025, to place a space computing satellite constellation into orbit. (PHOTO: XINHUA)

Innovation Frontier

Digitalizing Ancient Chinese Books with AI

By YANG Xue & LU Zijian

There are mountains of ancient Chinese books, and it will take years to repair and sort them all manually. Fortunately, using AI, this daunting task can now be expedited with more accuracy, making this form of literature digitization a breeze.

Twenty times faster

Liu Shuai, a PhD candidate of classical philology at East China Normal University, said he managed to sort through two million Chinese characters from ancient Chinese books in only one month last September, where AI was adopted to facilitate the work.

It was 20 times faster than his previous time for similar work, Liu said. Shidianguji, a smart platform jointly developed by Peking University (PKU) and ByteDance to digitalize ancient Chinese books, made it possible.

Character recognition, text proofreading, structure organization and punctuation proofreading are major processes

of sorting ancient books, where AI can save human labor.

When a picture of an inside page from an ancient book is uploaded to the platform, the Optical Character Recognition (OCR) technology will automatically tag the places, book names, times and people's names and titles in the picture. For uncertain Chinese characters, different colors will be marked by OCR to locate their position on the page, and the characters will be corrected based on the original text.

In the project Liu took part in, AI was used to do the first steps of ancient book sorting, then the public volunteers did the proofreading, and the experts dealt with the difficult and unresolved parts in the previous steps.

AI changed the workflow, as the "subcontracting" system made the process easier, which transformed traditional book sorting workshops into factories with assembly lines, said Liu.

Higher recognition accuracy

Ancient books are often marred by creases, missing words or faded ink, which makes it extremely difficult to decipher them. Traditional character recognition software is designed for printed materials, and becomes clumsy when it is used to decipher ancient books, as it often happens that a Chinese character can be written in different ways and styles, and there are also non-character strokes and symbols.

The above-mentioned challenges are the key reasons for the slow digitalization of ancient books in large libraries. The recognition accuracy of characters surged as AI stepped in to deal with difficult-to-recognize strokes and shapes.

AI recognition of ancient books is like restoring old photos. The project Liu participated in last year managed to restore the ancient book *The Book of Han: Treatise on Punishment and Law*, discovered in Dunhuang, northwest China's Gansu province. *See page 3*

China-Europe Cooperation Brings Stability to Global Economy

By WANG Jing

The year 2025 marks the 50th anniversary of the establishment of diplomatic relations between China and the EU. Over these 50 years, the economic and trade cooperation between the two sides has deepened.

At a time of increasing instability and uncertainties in the world, the bilateral relationship has given stability to the world economy.

By the end of 2024, EU enterprises had cumulatively made actual investments of over 150 billion USD in China, and China's cumulative direct investments in the EU amounted to nearly 110 billion USD, according to Yan Dong, Chinese vice minister of commerce.

China and the EU are the world's second and third largest economies re-

spectively. Together, their economies represent more than a third of the world economy, and their combined trade volume exceeds a quarter of global trade.

CR Express puts cooperation on the fast track

Express logistics provider MBB Logistics provides first- and last-mile logistics services for Amazon, Poland's largest e-commerce platform Allegro, and others. A crucial factor behind the expansion of its overseas warehouses in recent years is the China-Europe Railway Express (CR Express), which connects cities in China, Central Asia and Europe, boosting freight transport.

The goods warehoused and transported by MBB Logistics come from nearly 300 Chinese e-commerce platforms. One end of the line relies on thousands of Chinese manufacturing enterprises

while the other end connects to the vast European market.

The Port of Duisburg in Germany, a critical hub for China-Europe freight trains in Western Europe, boasting the highest cargo volume and value, handles four million containers annually.

The CR Express has not only facilitated trade between China and Europe, but also promoted the development of Duisburg, a former industrial stronghold, attracting a large number of Chinese enterprises to invest and settle there.

As the goods transported by the CR Express are becoming increasingly diverse, the trains are becoming more specialized, such as the "Tea Train" and "New Energy Vehicle Export Train," meeting the demands of consumers in the target market precisely.

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China, Russia Deepen Sci-tech Collaboration

International Cooperation

By Staff Reporters

China and Russia agreed to expand cooperation in the field of technological innovation, and to consolidate the industrial chain, said a bilateral joint statement. The joint statement on further deepening the China-Russia comprehensive strategic partnership of coordination for a new era was released on May 8.

According to the statement, the two sides will expand cooperation in areas such as innovation, basic research and applied research, regularly launch joint scientific and technological projects, implement scientific research projects, and support new models of scientific and technological cooperation.

In recent years, China and Russia have jointly made remarkable achievements in the field of science and technology. The two sides have jointly developed new projects in fields such as aerospace, quantum communication and artificial intelligence, achieving new breakthroughs in international industrial chain and supply chain cooperation.

Russia was the first country to sign a memorandum of understanding with China to cooperate on its initiative to create the International Lunar Research Station (ILRS) project. The ILRS is a scientific experimental facility attracting developing countries without their own space missions.

The two countries plan to share data between China's Chang'e-7 and Russia's Luna-26, and support Russian scientific payloads carrying the Chinese Chang'e-7 lander. China and Russia have expanded cooperation in satellite navigation, including conducting cooperation on the BeiDou Navigation Satellite System and GLONASS.

In addition, the two countries have formulated a sci-tech innovation cooperation roadmap during 2020-2025, carrying out cooperation in fields such as digital technology, big data, artificial intelligence, unmanned transportation systems, new materials and nanotechnology, new energy, energy conservation and environmental protection, information and communication, green agriculture, earth science and marine technology.

WEEKLY REVIEW

Huawei to Launch 1st Line of HarmonyOS Computers

Chinese tech giant Huawei will launch its first line of PCs powered by its HarmonyOS operating system on May 19. This is a significant breakthrough for domestic PC operating systems. According to Huawei, its HarmonyOS-powered computers currently have more than 150 dedicated PC applications and over 300 ecosystem-compatible applications.

1st 100,000-Ton-Class 'Giant of the Sea' Installed

The world's first float-over installation of a 100,000-ton-class offshore floating oil and gas production unit was successfully completed in Dalian, Liaoning province in northeast China, on May 9. This is the heaviest and most technically challenging offshore engineering operation ever undertaken globally. Weighing around 76,000 metric tons, the fully assembled unit is regarded as a true "giant of the sea."

Smart Power Generation Control System Passes Test

China's independently developed intelligent power generation control system has passed an official assessment. The system has significantly improved real-time data storage capacity and retrieval speed, and reduces the need for human intervention in large-scale coal-fired power generation units. This is a milestone in the country's core industrial control technologies.

3D Bioprinting Creates Biomaterials Without Surgery

Researchers at the California Institute of Technology developed Imaging-Guided Deep Tissue In Vivo Sound Printing (DISP), a technique that enables the fabrication of medical implants in vivo and the delivery of tailored therapies without invasive surgery. By using focused ultrasound and ultrasound-responsive bioinks, DISP offers safer and more accurate solutions for disease treatment.

New Graphic

**China's Digital Economy
Grows at an Accelerated Pace**
(In 2024)

**Newly disclosed
generative artificial
intelligence patents
globally** **45,000**

China accounts for **61.5%**

Digital technology innovation has reached a new level, and the rise of domestic artificial intelligence is contributing Chinese wisdom to the world.

Source : National Data Administration
Designed by YAO Yilu / Science and Technology Daily

WECHAT ACCOUNT



E-PAPER

