



# Science and Technology Daily

VOL.2-NO.36

THURSDAY, MARCH 17, 2022

WEEKLY EDITION

## China Tops Manufacturing for 12 Straight Years

By WANG Xiaoxia

According to data from the Ministry of Industry and Information Technology, the added value of China's manufacturing industry reached 31.4 trillion RMB in 2021, accounting for 27.4 percent of its GDP. Since 2010, the added value of China's manufacturing industry has ranked No.1 in the world for 12 consecutive years.

From 2012 to 2021, the added value of China's industry increased from 20.9 trillion RMB to 37.3 trillion RMB, of which the added value of manufacturing increased from 16.98 trillion to 31.4 trillion RMB, according to the National Bureau of Statistics (NBS).

As a consequence, China's manufacturing industry is making headway in terms of its international competitiveness, innovation capacity, structural upgrade and digital transformation.

As the only country in the world

to obtain all the industrial categories listed in the United Nations industrial classification, and the world's largest producer of over 220 types of industrial products, China's value-added industrial output, an important economic indicator, went up 9.6 percent year-on-year in 2021, and the figure brought the average growth rate in the past two years to 6.1 percent, the data from NBS showed on Jan 17.

The innovation capacity of the manufacturing sector has improved. The photovoltaic, wind power, shipbuilding and other industrial chains have further strengthened their international competitive advantages. NBS data shows that container output increased by 110.6 percent year-on-year, while chip output up 33.3 percent. Progress has also been made in tackling key problems in OLED displays, industrial motherboards and new materials.

See page 2



Fireworks illuminate the night sky during the closing ceremony of the Paralympic Winter Games Beijing 2022 at the National Stadium in Beijing. (PHOTO: XINHUA)

## Innovation-driven Development Blueprint for 2022

By ZHONG Jianli

As this year's Two Sessions came to an end, the government work report provided a blueprint for China's development in 2022. The country will continue to implement the innovation-driven development strategy and strengthen the foundation of the real economy. To that end, a number of tasks are outlined in the report.

### Basic research

China will implement a 10-year plan to provide stable and long-term support for basic research.

Speaking to the press during the Two Sessions, Wang Zhigang, minister of Science and Technology emphasized the importance of basic research. He said, basic research and frontier exploration are to expand people's cognition and provide a source for technological innovation. They are the fundamental, pioneering and key starting points of research and development, so the government has given priority to basic research.

### Talent development

The country plans to speed up construction of major international talent centers and innovation hubs, improve systems and mechanisms for talent development, and increase support for young researchers, so that talented people across the board can focus on their research and give full play to their abilities. See page 2

## WEEKLY REVIEW

### China's First Commercial Maglev 3.0 Train on the Way

The commercial maglev 3.0 train had completed a series of tests in Shanghai till March 10. There are multiple tech breakthroughs achieved in the development process, such as unmanned driving and non-contact power supply.

### Top 10 Paleontological Breakthroughs of 2021 Released

The Paleontological Society of China has announced its top 10 paleontological breakthroughs of 2021 on March 10, including vertebrate paleontology, paleoanthropology, geochemistry and paleobotany, among others.

### Evidence of Wind and Water Erosion Found on Mars

A new study published in the journal *Nature Geoscience* on March 8 has revealed that the site where China's Mars rover Zhurong landed must have experienced wind and possibly water erosion, providing more evidence on the surface features of the red planet.

### Chinese Researchers Developed Inhalable COVID-19 Treatment

Researchers at the Chinese Academy of Sciences said that they have developed an inhalable neutralizing antibody that can effectively neutralize the virus strain and variants like Beta, Delta and Omicron.

WECHAT ACCOUNT

E-PAPER



## Cambodia-China Friendship Hospital Inaugurated

By TANG Zhexiao

Constructed with a grant from China, a landmark modern hospital in Cambodia's eastern province of Tboung Khmum officially began operation on March 7.

The Cambodia - China Friendship Tboung Khmum Hospital started to build in 2019 by the China Railway Construction Group Co. Ltd. It has a construction area of 24,000 square meters and a capacity of 300 beds, being divided into different wards such as outpatient, emergency and imaging.

As the largest modern general hospital with the highest level of medical care in Tboung Khmum, it serves as a central hospital for locals in the eastern and northeastern regions of Cambodia, providing more convenient medical care for people who previously had to travel to Phnom Penh for medical treatment.

Cambodian Prime Minister Samdech Techo Hun Sen said the hospital was another testament to the fruitful cooperation between Cambodia and China under the frameworks of the comprehensive strategic partnership and the community with a shared future.

Hun Sen thanked the Chinese government and people for their assistance

to Cambodia. "Such a huge hospital had never been available in Cambodia's provinces before," said the Prime Minister. "It is the largest modern hospital in Cambodia's provinces, apart from in the capital Phnom Penh."

With the assistance of medical supplies and equipment, and technologies from China, people would enjoy quality medical care services, said Eng Kheang, director of the Cambodia-China Friendship Hospital.

Speaking during the hospital's inauguration ceremony, Chinese Ambassador to Cambodia, Wang Wentian said the hospital was emblematic of China-Cambodia friendship and would play an important role in safeguarding the lives and well-being of the people.

Wang said that China would be sending the world's first state-level medical team of traditional Chinese medicine to Cambodia, to share experience and provide assistance for COVID-19 prevention.

According to Wang, a new batch of vaccines will be donated to Cambodia as soon as possible to support the Cambodian government's efforts to vaccinate children. Cambodia has started COVID-19 vaccinations for three and four year olds using China's Sinovac vaccine in February.



China-aided hospital inaugurated in eastern Cambodia. (PHOTO: XINHUA)

## Editor's Pick

## Joint Efforts Support Africa's Green Development

By WANG Xiaoxia

China has always firmly supported Africa's sustainable development, and the two sides have collaborated on more than a hundred projects in the field of clean energy and green development.

As China and Africa embrace the new phase of development, their joint efforts on green energy cooperation, which is suitable for local conditions, will contribute to the "green recovery" of the post-pandemic African economy.

### The world's first sisal biogas electricity plant

The tropical country of Tanzania is one of the world-renowned producers of sisal. As a hard fiber source, only between two and four percent of a sisal can be processed into usable fiber. Now, the sisal waste is used to produce biogas for electricity generation and organic fertilizer as well.

A biogas power plant is based in Hale town, Tanga region, northeast Tanzania. The plant, feeding on sisal waste, the first one of its kind in the world, is supported by the United Nations Industrial Development Organization (UNIDO) and jointly completed by the Chengdu Institute of Biology under the Chinese Academy of Sciences and its German partner.

With designed installed capacity of 30 megawatts, it has met the electricity demand of Tanga region since its inauguration in 2008.

To date, sisal biogas power plants have been built in Katani, Mazind and other places in Tanzania, generating between three and five percent of Tanzania's electricity.

Apart from electricity, it is estimated that sisal waste from two processing machine can produce 350 cubic meters of liquid fertilizer and 40 tons of solid fertilizer per day. With sisal factories and biogas power plants, local villagers' living conditions have been improved.

Salum Shante, former adviser to Tanzania's president, said that China's biomass energy technology has made huge contribution to Africa's energy development and more cooperation is expected to boost Africa's green development.

Biogas technology, which can gener-

ate electricity and control pollution, is suitable for promotion and application in developing countries. From Madagascar to Lesotho, from Benin to Cote d'Ivoire, Chinese biogas technology is taking root in Africa.

### Water conservancy development project

About four hours' drive from Nairobi, the capital of Kenya, the Thwake dam is under construction at the intersection of the Thwake and Athi rivers.

Being built by the China Gezhouba Group Corporation (CGGC), it is a strategic water supply project for the large semi-arid area of Makueni county and surrounding regions, and comprises a multi-purpose dam for water supply, hydropower generation and irrigation development. Construction of the first phase of the project is expected to be completed by the end of 2022.

Kenyan President Uhuru Kenyatta hailed the project saying that when completed it will boost the local economy through an irrigation plan, mitigate drought and be an answer to the perennial flood problems in the lowlands.

See page 4

## Chinese Satellite Acquires Global Gravity Field Data

By WANG Xiaoxia

China's satellite TianQin-1 has for the first time independently acquired global gravity field data, making China the third country in the world with the ability after the U.S. and Germany, said NPC delegate Luo Jun during this year's Two Sessions.

The earth's gravity field reflects the distribution of the earth's matter and its changes with time and space. The observation of a global gravity field can serve geodesy, geophysics, oil and gas exploration and other fields, while also contributing to global climate change and disaster prevention and reduction.

According to Luo, an academican of the Chinese Academy of Sciences, TianQin-1 is not specially designed for collecting gravity data, but rather to test the key technologies for future space-based gravitational wave (GW) detection. During this process, gravity field detection is one of the breakthroughs made in many frontier fields by the TianQin project.

On August 7, 2020, TianQin-1 carried out an application test of the earth's gravity field for about 30 hours. During this period, the Global Navigation Satellite System (GNSS) receiver and inertial sensor, the key payload of TianQin-1, were switched on at the same time, and the satellite's flight track basi-

cally covered the globe, said Luo.

After data was collected, the project team from Sun Yat-sen University and Huazhong University of Science and Technology carefully analyzed the data, verified the calculation, and obtained the global gravity anomaly distribution map and the global geoid height distribution map. Recently, they completed the global gravity field data scientific report and the on-orbit test summary evaluation.

However, the gravity field detected by TianQin-1 was not of high accuracy, said Luo, saying it is rather more significant to help pave the way for China's future gravity satellite programs.