



DEDICATED EFFORT REAPS REWARD OF INNOVATION PROGRESS

PAGE 2 | FOCUS



BRI COOPERATION BENEFITS ALL INVOLVED

PAGE 3 | INSIGHTS

# Science and Technology Daily

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**WEEKLY EDITION** 

Support Better Development

China, and brought tangible benefits to its people.

end of 2021, ranking second worldwide.

in the first eight months of this year.

For the past decade, science and technology have been playing an important role in socio-economic development of

Obviously, the breakthroughs in science and technology

The wider application of new technologies, such as artifi-

have boosted emergence of new industries and an upgrade of

cial intelligence, big data, blockchain and quantum communi-

cation, has fostered new products and business models in

terms of smart terminals, telemedicine and online education.

China's digital economy has reached 7.1 trillion USD by the

logical breakthroughs, is leading the global automobile indus-

try, with its sales ranking first globally for a seventh straight

year in 2021, and skyrocketing by 119.7 percent year-on-year

and the growing capacity of clean energies including solar

photovoltaic, wind power and nuclear power have promoted

tural technologies making land more arable and improving

crop yields. During the COVID-19 pandemic, people's lives

and health have always been front and center in terms of sup-

port from medical scientific achievements including nucleic acid testing technique, COVID-19 vaccines, anti-body thera-

narrow the gap between regions. The coastal provinces and

megacities help promote the application of new technologies

to poverty alleviation and prosperity in the less developed in-

To make sure all the people benefit from its development, China has also launched pairing assistance projects to

the green transition of China's energy consumption.

pies as well as traditional Chinese medicines.

China's new energy vehicles sector, powered by techno-

More efficient coal-fired power generation technology

Positive effects of sci-tech advances on people's livelihoods are obvious. Food security is safeguarded with agricul-

Sci-tech Advances

By Staff Reporters

# The Prosperity of A Shared Future

By WANG Xiaoxia & LIN Yuchen

Over the past decade, upholding the philosophy of building a community with a shared future for mankind, China has been committed to broader global collaborations and more inclusive development.

Projects carried out under the framework of the Belt and Road Initiative (BRI) have promoted connectivity and invigorated regional trade since it was proposed in 2013.

The China-Europe Railway Express has become an anchor of stability for global supply chains. The China-Europe freight trains have mapped out 82 routes so far, linking 200 cities in 24 European countries directly to China.

The establishment of HBIS Group Serbia Iron & Steel in 2016 has saved the Smederevo steel mill in central Serbia from the verge of bankruptcy, and provided more than 5,000 jobs for local people. Its production capacity and environmental performance have greatly improved.

In December 2021, the China-Laos railway began operating, strategically transforming Laos into an accessible region in-land, linking it not only to China but also to several Southeast Asian countries like Thailand and Singapore.

Through cooperation with 149 countries and 32 international organizations, the BRI is fast becoming "a belt of prosperity" benefiting the world and "a road of happiness" benefiting all peoples.

In the face of rising protectionism, China has been always committed to openness and inclusiveness, adding momentum to promoting economic recovery.

Since 2018, the country has held four international import expos. The opening of China International Fair for Trade in Services, along with the establishment of Asian Infrastructure Investment Bank and New Development Bank marked the country's endeavors to common development.

President Xi Jinping has proposed a Global Development Initiative, which aims to complement the 2030 Agenda for Sustainable Development and create synergy among countries to achieve more robust, greener and more balanced global development.

The Initiative has received endorsement and support from the UN and many other international organizations, as well as some 100 countries in the world.

In addition, China has facilitated the implementation of the Regional Comprehensive Economic Partnership, and applied to join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership and the Digital Economy Partnership Agreement, moving toward regional cooperation in the face of protectionist headwinds.

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TECH FOR BETTER LIFE IN CHINA

4



Rural Development: The China Way Works

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See page 4 for detailed reports



### **Livestream Space Class from Tiangong**

Chinese astronaut Liu Yang during the livestream space class from the country's space station Tiangong on October 12. (PHOTO: CCTV Livestream screenshot)

#### **Editor's Pick**

### Better Infrastructure, Better Life

#### 10 Years Review

By LU Zijian

From high speed railways to the South-to-North Water Diversion Project and 5G base stations all over the country, China has made big strides in both traditional and new infrastructure.

Most importantly, the ongoing improved infrastructure has greatly benefited people's daily life in China.

#### More convenient transportation

By the end of 2021, the length of China's operational railway exceeded 150,000 kilometers with an upsurge of 54.4 percent compared with that of 2012, according to a report released by the National Bureau of Statistics on September 22.

The operational length of high speed railways reached 40,000 kilometers, ranking No.1 in the world, equaling 4.3 times that of 2012 and covering over 95 percent of Chinese cities with a population of more than a million.

The expressways and highways also witnessed considerable growth with the former reaching 169,000 kilometers, 1.8 times that of 2012 and the latter 5.28 million kilometers, up by 24.6 percent.

In particular, the length of rural highways has increased by more than 900,000 kilometers in the past decade. The Motuo Highway in southwest China's Xizang Autonomous Region was opened to traffic in 2013, meaning all counties within the country were connected to the national highway network.

The highways not only made it much more convenient for people in rural areas to travel, but also brought them

economic benefits. Agricultural products can be transported to markets faster, and more tourists from cities can enjoy their holiday time in scenic rural areas.

In Xinghua village, Xuzhou city in east China's Jiangsu province, visitors from nearby cities come to enjoy flowers in March, pick apricots in May and barbecue during holidays, with the number of visitors reaching 500,000 person times in peak season.

#### Improved water facility

Water is the source of life, and China has been working to provide clean and safe water to all its residents, including people living in rural areas.

Since 2012, over 466 billion RMB has been invested in the water supply projects in rural areas nationwide, with the number of such projects rocketing to more than eight million by the end of 2021. *See page 2* 

# WEEKLY REVIEW

ASO-S Launched to Explore the Sun

land and rural areas.

The Advanced Space-based Solar Observatory (ASO-S) was successfully launched from the Jiuquan Satellite Launch Center in northwest China on October 9. The ASO - S will mainly focus on solar flares and coronal mass ejections and offer data support for space weather

10 Million Tons of Oil and Gas Produced in China's Largest Super-deep Oilfield

The accumulated oil and gas production of Fuman Oilfield has exceeded 10 million tons, according to China National Petroleum Corporation on October 6. Located in northwest China's Xinjiang Uygur Autonomous Region, Fuman Oilfield is the country's largest super-deep oilfield. Chinese Scientists Realize Free-space Dissemination of Time and Frequency at High Precision over 100 km

For the first time in the world, Chinese scientists managed to realize free-space dissemination of time and frequency at high precision at a distance of more than 113km. The technique can be directly used in ground-based applications and lay the groundwork for future satellite time-frequency dissemination.

Four More Chinese Irrigation Sites Listed on WHIS

The International Commission on Irrigation and Drainage on October 6 granted the inclusions of the Tongjiyan Irrigation System and three other irrigation sites on the list of World Heritage Irrigation Structures (WHIS), making the amount of Chinese irrigation projects on the list reach 30.

## China's Innovative Performance Rank Climbs

By LIN Yuchen & LU Zijian

China has ranked 11th in global innovative performance in 2022, moving up from 12th in 2021, according to the Global Innovation Index (GII) published by the World Intellectual Property Organization on September 29.

Having witnessed a steady climb for ten successive years, the country's ranking in the index has leapt from 34th in 2012 to 11th this year, taking the 1st spot among 36 upper-middle-income economies.

"From 2012 to 2021, China's research and development (R&D) spending increased from 1.03 trillion RMB to 2.79, with the ratio of total national R&D expenditures to GDP jumping from 1.91 per-

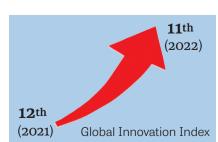
cent to 2.44 percent," said Mao Ning, spokesman of the Ministry of Foreign Affairs on September 30.

China has now the same amount of global top science and technology (S&T) clusters as the U.S. The Shenzhen-Hong Kong-Guangzhou cluster is the second largest S&T cluster in the world, only preceded by the Tokyo-Yokohama cluster in Japan, according to the index.

China also performed very well in the Nature Index, in terms of research output from July 1, 2021 to June 30, 2022, by ranking first in the metric Share and second in Count. The points of both metrics are given to a country or region based on the articles published by authors from the country or region.

According to Nature.com, a country

or region gets one point of Count for each article that has at least one author from that country or region, whereas the total Share available per article is one point, which is equally distributed among all authors, and the total Share for a country or region per article is calculated by adding up the points of the Share for individual authors from that country or region.



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