



Science and Technology Daily

VOL.4-NO.142

MAY 25-26, 2024

New Quality Productive Forces

New Materials Cornerstone of High-tech Industries

By CHEN Chunyou & SUN Yu

High-temperature alloys support the operation of aviation engines, enabling the C919 aircraft to fly. Lithium-ion battery separators safeguard the core power so that new energy vehicles can travel farther. Highly streamlined carbon fiber blades enhance power generation efficiency, illuminating households. All of these advancements have been made possible by new materials.

Peng Shou, an academician of the Chinese Academy of Engineering, once said that to promote the development of new quality productive forces, frontier innovation, industrial innovation and model innovation should be accelerated. Applying new materials and new products is an effective means to transform new quality productive forces into real productive forces.

Cornerstone of development

"The new materials industry is the cornerstone of high-tech industries because it supports the construction of major projects and fosters emerging industries," Xiao Jinsong, a researcher at the China Center for Information Industry Development, told *Science and Technology Daily*.

Data from the Ministry of Industry and Information Technology (MIIT) show that from January to September 2023, the total output value of China's new materials industry surpassed five trillion RMB, maintaining double-digit growth.

"To achieve more breakthroughs requires strengthening the original innovation ability, enhancing upstream and downstream industrial collaboration, and promoting production and application demonstration, with a forward-looking layout to lead the industry to accelerate development," Xiao said.

Injecting industrial momentum

In 2023, the MIIT and the State-owned Assets Supervision and Administration Commission of the State Council issued a catalog for developing frontier material industrialization.

See Page 2



The 20th China (Shenzhen) International Cultural Industries Fair kicks off in Shenzhen, south China's Guangdong province, on May 23. The photo shows an oracle bone statue in the Henan Pavilion. (PHOTO: VCG)

Editor's Pick

Sci-Tech Week: Elevating Public Scientific Literacy

By ZHONG Jianli

Since 2001, China has been observing the National Science and Technology Week (NSTW) every May, a vibrant celebration of innovation, discovery, and the wonders of science.

To be held from May 25 to June 1 this year, it is a platform to showcase the nation's latest technological advancements and research breakthroughs, aiming to engage the public and enhance scientific literacy across all walks of life.

According to the latest data from China National Bureau of Statistics, the proportion of Chinese citizens with scientific literacy reached 14.14 percent in 2023, while the number in 2010 was only 3.27 percent.

The remarkable enhancement of Chinese scientific literacy is the result of efforts from various quarters including

the government, academia and society. The launch of the NSTW is part of these efforts, and plays an essential role in raising China's scientific literacy.

Bridging the gap between science and people

The NSTW is not merely a series of events but a convergence of innovation and discovery. From science exhibitions and interactive demonstrations to public lectures and workshops, the week offers a multifaceted approach to engaging the public in the realm of science.

For example, under the theme of "Loving Science, Advocating Science," the 2023 NSTW hosted diversified activities including science lectures in schools and campuses, popular science video contests, and science tours, all aimed at making science more accessible and relevant to people's everyday lives.

By creating a vibrant platform that

bridges the gap between the scientific community and the general public, the NSTW also helps raise people's awareness about important scientific issues, such as environmental protection, public health, and the responsible use of technology.

Fostering curiosity and learning

At the core of the NSTW is the endeavor to unlock the door to sci-tech knowledge and lead everyone on a journey of scientific exploration.

Through hands-on experiments and immersive displays, the participants are not only spectators but also active participants in the process of discovery. By offering engaging experiences that cater to various learning styles and interests, the event stimulates curiosity in participants, encouraging them to question, experiment, and unearth the mysteries of the universe.

See page 4

Int'l Museum Day Celebrates Technological Progress

By Staff Reporters

International Museum Day (IMD), celebrated annually on May 18, is a key event for promoting museum culture and increasing people's awareness and appreciation of cultural heritage.

The International Council of Museums (ICOM) began organizing IMD from 1977. On this day every year, museums worldwide organize various activities so that people can experience the charm of these institutions.

China joined ICOM in 1983 and started to hold IMD events since then. This year, the main IMD event was held from May 17 to 19 at the Shaanxi History Museum in northwest China, themed "Museums for Education and Research." It showcased the latest achievements in China's museum development, emphasizing the role of museums in educa-

tion and research.

The opening ceremony saw several key announcements, including the release of latest data on China's museum development, the unveiling of the fifth batch of national first-tier museums, and the accreditation of 20 National Revolutionary Cultural Relics Synergy Centers in collaboration with the Ministry of Education.

An exhibition titled "Reading China in Museums" was also launched along with the announcement of the "Top 10 Exhibitions of National Museums."

The Shaanxi History Museum event also included the inauguration of the Qin and Han Civilization exhibition, a commemorative exhibition on the 10th anniversary of the Silk Road's successful UNESCO listing, and a museum night event.

Various museums and memorial

halls across Shaanxi province also organized distinctive exhibitions, academic discussions, educational programs, and outreach activities. To enhance visitors' experience, many museums have integrated technology to offer engaging ways such as interactive exhibits, virtual tours, and digital learning platforms to explore cultural heritage.

Other provinces including Shandong, Henan, and Heilongjiang also hosted a series of events featuring science popularization. Some exhibited cultural heritage such as the tri-colored glazed pottery of the Tang Dynasty (618-907) in Quanzhou city, Fujian province.

IMD underscores museums' commitment to education and research, fostering cultural awareness, and enriching public engagement with heritage and knowledge through innovative technological initiatives.

China's Medium-voltage Micro-grid Technology Making Overseas Debut

International Cooperation

By LI Linxu

In its first foray into international market, China's medium-voltage micro-grid technology has landed in a Brazilian university campus.

China Electric Power Research Institute (CEPRI), together with Brazil's CPFL and Hangzhou Hexing Electrical Co., Ltd, have in recent days successfully completed the factory testing of domestically sourced equipment for the project's energy management systems, electrochemical energy storage and components in Ningbo, marking a solid step forward for the technology's go-global endeavor.

As per the special testing requirements of the Brazilian side based on the on-site operation conditions in Brazil, the project team designed the testing plan, set up the testing circuit and completed all factory testings, including black start test and grid-connected/islanded seamless transition test, said Sha Guanglin, director of advanced power distribution research office, CEPRI.

All the equipment were running properly, with the indicators satisfying the operational requirements of the Brazilian distribution network, added Sha.

The micro-grid project under construction at the State University of Campinas in Brazil is a medium-voltage micro-grid demonstration project with distributed low-voltage photovoltaics and energy storage as the main power source.

The project covers the main buildings and power equipment of the entire campus, such as educational buildings, gymnasiums, libraries, conference centers, administrative buildings, and e-bus charging stations.

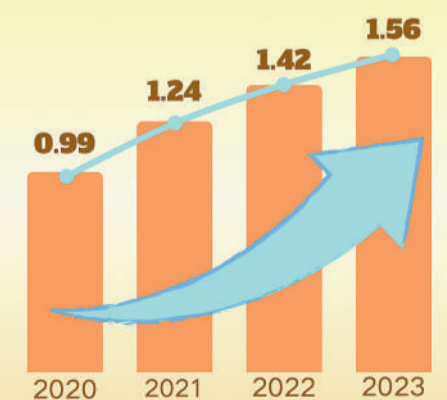
It has a total capacity of internal distributed photovoltaics exceeding 330kW, and is equipped with 1MW/1.27MWh energy storage equipment, a diesel generator and a gas turbine. The distributed photovoltaic power supply accounts for more than 30 percent of the total energy supply of the campus.

The entire micro-grid is equipped with a central energy management system, possessing abilities such as power prediction, voltage/reactive power support, grid-connected/islanded seamless transition, and black start.

See page 4

New Graphic

China's Listed Companies Report High Growth in R&D Expenditure (trillion yuan)



Source: Xinhua Finance
Designed by YAO Yilu / Science and Technology Daily

WECHAT ACCOUNT



E-PAPER

