

Building Smarter and Greener City

By WU Xingduo & LONG Yun

In order to boost the coordinated development of the Beijing-Tianjin-Hebei region, China announced an ambitious plan to establish Xiongan New Area in Hebei province on April 1, 2017.

As a renowned Finnish architect with a strong background in understanding green and smart cities, Patrick Eriksson was selected as a senior adviser by the Xiongan New Area Administrative Committee to integrate his design concept into the development of the region.

A new business journey in China

Eriksson decided to advance his career in China at the age of 60 in December 2008. "People have asked me why I have such a strong affection for China, and the reason dates back to my childhood," he explained to some friends who were surprised by his choice, adding that he has a deep appreciation for traditional Chinese philosophy, especially the concept of "maintaining balance in the universe."

According to Eriksson, he is proud to contribute to the development of eco-cities in China. Some projects he co-chaired, such as China-Singapore Tianjin Eco-City, Beijing Mentougou Eco-Valley and Kunming Cheng-gong New District, are all included in the list of "Most famous Eight Eco-city Projects in China."

Regarding the construction of eco-cities in China, he applauded the way the Chinese government has responded to the challenge of climate change. From his perspective, China has already been the world's largest producer of solar panels, paving the way for the wide application of alternative energy sources, even if the use of coal remains widespread. At the same time, he emphasized that China is on the right path of ecological development and is leading the world in developing eco-cities.

Building a resident-friendly community

Xiongan's establishment has garnered much global interest. When asked about Xiongan's future role, Eriksson said, "It should emerge as a new landmark for China, offering the world a new image of China, dis-



Architect Patrick Eriksson. (COURTESY PHOTO)

playing China's efforts in sustainable development." Modern ideas and international practices must be incorporated into the region's layout, and major projects must be constructed to serve as a template for future urban development.

Speaking of the development of Xiongan New Area, Eriksson has his own opinions and expectations. As a senior adviser to Xiongan New Area, he noted that Xiongan should be built in the way of a university adopted, adding that the people in the cities should be provided with an environmentally friendly community.

He is concerned with optimizing the functions of a city. In his opinion, the city's functions should include commercial, recreational, and industrial aspects. This mixed-use area makes urban life more comfortable and can accommodate the needs of various age groups.

Moreover, Eriksson maintained that measures to

develop Xiongan should prioritize promoting intelligent and eco-friendly transportation. "Electric cars (EV) are becoming increasingly popular. They can reduce pollution and empower the automation of public transportation," he said.

Eriksson pointed out that bicycle lanes are essential in urban planning.

Making Xiongan greener

"Green development" is a buzzword repeatedly underlined in the development plan of Xiongan. It aspires to become a green city with harmonious human-environment interaction.

Eriksson firmly believes that Xiongan will become a zero-waste city, and he was confident that this new area would become a sustainable model of urban development. Meanwhile, urban greening is another dimension that Eriksson pays close attention to, as it plays a significant role in reducing carbon emissions and controlling pollution. The ecological strength of Xiongan New Area is therefore also reflected in the area's planning and development.

According to *People's Daily*, on December 31, 2021, the proportion of green in the area stands at 70 percent, signaling an environmentally friendly blueprint for the development of the new area.

In terms of the cooperation in green development between Finland and China, Eriksson noted that Finland could share the experience of forest protection and afforestation with China.

In addition, he was impressed by the China-Finland Winter Sports year held in 2019. "China and Finland have collaborated extensively to advance the Beijing 2022 Winter Olympics and other winter sports," he said.

In 2019, Eriksson was presented with the Hebei "Yanzhao Friendship Award" for his contribution to connecting Hebei with the rest of the world.

This story is in cooperation with the International Talent Magazine published by Foreign Talent Research Center of MOST.

Creating Favorable Environment for Global Talents

By Staff Reporters

For the last ten years, the service system for foreign experts has been steadily improved and remarkable achievements have been made in a variety of fields, which has played a crucial role in enhancing China's opening-up level, facilitating international scientific and technological cooperation and talent exchanges, and fostering greater mutual understanding between China and other civilizations.

On August 9, National Working Conference on Foreign Experts was held in Fuzhou. The event provided a comprehensive summary of the progress and accomplishments of the work on foreign experts over the past few years and

made plans for the work on foreign experts in the new era.

The conference also highlighted the significance of studying and implementing the spirit delivered by President Xi Jinping's important remarks on scientific and technological innovation and his important instructions on talent-related work. China will adopt a more open policy of talent-related work based on the principles of "openness, inclusiveness, mutual benefit and sharing."

At the same time, China is ready to create a favorable environment and share its development opportunities with global talent through a more efficient system and more effective measures.

Traditional Eastern Wisdom

Tang Sancai: Treasure of Ancient Chinese Ceramic Firing Techniques

By BI Weizi

As an outstanding symbol of ancient Chinese pottery technology, Tang Sancai appeared in the early Tang Dynasty (618 - 907). Tang Sancai is a multi-colored pottery, with yellow, green and white being the most predominant colors. The lead glaze of Tang Sancai was toxic, so it was not used in daily utensils, but mostly appeared in the tombs of the nobles in Tang Dynasty.

China has a long history of pottery making. As early as in the Yangshao and Longshan cultures, there was already beautifully shaped and colored pottery. In the Han Dynasty, it was possible to fire monochrome glazed pottery in green. During the early Tang Dynasty, with the development of a social economy, there was a new breakthrough in the process of color pottery, which would use multiple glaze colors at the same time, and thus Tang Sancai was produced.

Two firings are needed to produce Tang Sancai using lead-glazed earthenware. The first firing was made, without



A black glaze horse is on display at National Museum of China. (PHOTO: VCG)

saggers, to toughen the body. The second was undertaken after applying the glazes for their maturation. The basic glaze appears white after firing, metal oxides are added to the basic glaze to make yellow and green colors, while cobalt oxide makes blue. As a traditional cultural product, Tang Sancai not only enjoys a pivotal status in the history of Chinese ceramics and art history, but also plays a significant role in the cultural exchange between China and foreign countries. It was exported to other countries and regions in the early Tang Dynasty and was loved by people from all walks of life.

Multi-Media

Tech For Better Life in China-EP.4



What is the latest trend in the construction industry? Luc Taerwe, member of Royal Flemish Academy of Belgium and chair professor at Tongji University said in a recent interview that there is a trend to move from classical construction, which is very labour intensive, to smart construction in recent years. He added that with high-level experimental facilities, China is at the forefront of the development of new and advanced building materials and construction techniques, and contribute to the global carbon reduction.

For further information, please scan the QR code above.

Service Info

Do COVID-19 Antigen Test Kits Need High-temperature Protection?

By CHEN Xi & BI Weizi

At-home COVID-19 rapid testing is considered a key tool in the battle against the virus, but now many people are very concerned that the current high temperature and humidity levels would adversely influence the accuracy of the test results.

"Generally speaking, as long as the COVID-19 antigen test kits are not exposed to direct sunlight for a long time, being stored at room temperature will not affect the accuracy of their testing results," Liu Chaoyang, manager of a biotech company in Tianjin, told *S&T Daily*. "If the room temperature is beyond the upper limit of the storage temperature, the test kits would expire more rapidly,

since the COVID-19 antigen test kits contain antigen antibodies, which are meant to be stored within a specific range of temperatures for their efficacy. Being exposed to high temperatures would lead to protein denaturation, thus resulting in false negative or positive."

The storage instructions that come with most of the COVID-19 antigen test kits on the market recommend that the at-home COVID-19 diagnostic test kits should be kept in a cool, dry place between 2-30°C without direct sunlight.

"Occasionally being kept beyond the temperature frame will not affect the accuracy of the test kits," said Liu, adding that the storage conditions of the test kits are not as stringent as some other biological agents, which are required

to be stored within 2 to 8°C.

However, if the room temperature exceeds 30°C for a long time, it is recommended that the test kits be stored in the refrigerator with the appropriate temperature range. Liu also stressed that the COVID-19 antigen test kits should never be stored in the freezer of a refrigerator. "After freezing, the bottle may swell and crack, and repeated freezing may also have an effect on the properties of the extract, causing it to appear as precipitates."

Since the COVID-19 test kit is packaged in a sealed aluminum foil bag, there is no need to worry about contaminating food when it is placed in the refrigerator. However, in order to avoid contamination of the outer packaging of the test

kits with food, which would produce unreliable test results, it is still recommended to put the test kits in a plastic bag before placing it in the refrigerator.

It should be especially reminded that after taking out a COVID-19 test kit from the refrigerator, you should let it warm up to room temperature before using it. Liu explained that the reason to let the test kit "back to room temperature" is because the water vapor in the air will be liquefied at test card, which will affect the accuracy of the test results.

After unpacking, it is best to use the test kit within one hour. The temperature of the environment in which it is used is recommended to be between 15 and 30°C and within 80 percent of relative humidity.

Science Night Sparkles

By Staff Reporters

On the evening of July 29, with the opening of the Science Night, the Science Lecture by Foreign Experts was held simultaneously at National Zoological Museum of China, and Paleozoological Museum of China, which attracted more than 100 students and parents.

At National Zoological Museum of China, professor Marco Antonio Cabero Zabalaga, deputy secretary general of South-South Biodiversity Science Project of China Biodiversity Conservation and Green Development Foundation, gave a lecture themed Envisioning Biodiversity

and Green Science for Sustaining Human Well-being. He began the lecture by asking a few inspiring questions such as, "What would our life be like if there were no bees in the world", and went on to talk about the significance of biodiversity, the main problems facing biodiversity and the environment, what we can do to protect the environment, and preserve biodiversity. Zabalaga, called on the young generation, who are the "future of the planet", to take action to protect biodiversity.

Meanwhile at Paleozoological Museum of China, under the theme of Birds-The Amazing Flying Dinosaurs, Dr.

Thomas Stidham, American vertebrate paleontologist, assisted the students to compare and study various bird pictures, learn about the way different birds stand and breathe, their skeletal structures and feather characteristics, explore the relationship between birds and dinosaurs, and uncover evidence proving that birds are descended from dinosaurs.

These vivid and interesting scientific insights stimulated the student's interest in bird research, and they were eager to ask questions.

As a major demonstration activity of the National Science and Technology

Activity Week, the "Science Lecture by Foreign Experts" was co-sponsored by department of science and technology talent and popularization under the Ministry of Science and Technology (MOST) and Foreign Talent Research Center. Since 2019, nearly 50 science lectures have been organized, with foreign experts from 20 countries participating as keynote speakers on topics related to AI, chemistry, physics, engineering, aviation, materials and other fields, which have all been well received by all parties.

Source: Foreign Talent Research Center, MOST

IPv6 Large-scale Deployment Accelerated

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Since the start of this century, some universities and research institutes have participated in China's Next-Generation Internet (CNGI) demonstration project, and built a CERNET2 network that deploys IPv6 in 2004.

In 2021, the high-performance backbone network of experiment facilities was opened, totally based on IPv6, and

its core nodes are distributed in 40 universities to demonstrate key technology of the future Internet.

As for China's three biggest telecom operators, China Telecom has built an end-to-end IPv6 "highway", and basically

completed the transformation of its cloud network for end-to-end IPv6 deployment.

By the end of June, China Mobile had allocated 772 million IPv6 addresses to its mobile network and 169 million addresses to fixed broadband. Mean-

while China Unicom is deploying IPv6 in its new gigabit network and 5G network, while upgrading its existing network infrastructure for IPv6 deployment.

Since China has built the world's largest 5G network, "IPv6+5G" is empow-

ering digital transformation of industries. For example, medical logistics robots operating on a faster 5G network deployed with IPv6, have been widely used in the renowned Ruijing Hospital in Shanghai.

At present, the number of active us-

ers on the IPv6 Internet has reached 693 million in China, and mobile network traffic accounts for more than 40 percent of the total. By the end of 2025, China will fully establish a IPv6 system that embraces technology, industry, facility, application and security, with 800 million active users and 400 million connected devices to the IoT, according to the Cyberspace Administration of China.