A Russian Expert's Decades Long Association with China

By JIANG Yun and BI Weizi

The sturdy grey haired man wearing a paper birthday crown is in high spirits. On December 15, a simple but festive birthday party was held in Quhua Hospital, Quzhou, Zhejiang province, where Sitlivy Nikiforovich, a fluorine chemical expert from Russia, celebrated his 90th birthday.

Since 1993 when he came to Quzhou as an expert to help with the fluorine chemical industry project of the Juhua Group Corporation, Nikiforovich's relationship with China was established. As early as 1998, he was bestowed with the Chinese Government Friendship Award for his dedication to the industrial and technical cooperation between Russia and China.

Starting the journey to China

Being hydrophobic, non- wetting, high density and resistant to high temperatures, polytetrafluoroethylene (PTFE) is an incredibly versatile material with a wide variety of applications especially in chemical, machinery, and aerospace fields. In the 1980s and 1990s, it was a much sought after property both in domestic and foreign markets.

In the early 1990s, the Juhua Group Corporation entered the fluorine chemical industry due to the need for transformation. It was at this time when the Russian Applied Chemistry Research Center cooperated with China in a joint venture with Juhua to develop and sell fluorine polymer materials and products.

After careful consideration, the Russian side appointed Nikiforovich as the project leader in order to produce PTFE as quickly as possible. Nikiforovich, a recipient of the Merited Chemist of the Russian Federation, graduated from Leningrad Institute of Technology (now Saint Petersburg State Institute of Technology) and had been devoted to the design of all fluorine chemical plants in the former Soviet Union for more than 40 years.

Mr. Sitlivy Dmitry Nikiforovich.
(COURTESEY PHOTO)

Entrusted with a mission at a difficult time

In 1994, a group of foreign experts, including Nikiforovich who was already over 60 years old, took only three months to come up with the first design draft of the project. This was the start of the largest high- tech chemical project between Russia and China.

However, the challenge was far from over. To put the blueprint into practice, Russian experts had to stay to supervise the implementation of the program. But the temperature in Quzhou in April was close to 30℃, which was undoubtedly a physical and mental test for the Russian experts used to living on the colder Siberian plain. Homesickness became a factor and many experts expressed their wish to return to Russia. Nikiforovich, however, opted to remain behind.

During his stay, he once climbed the 18-meter-high incineration tower in the biting wind, squatting near the incineration nozzle to record experimental data. Even after the commissioning phase, he continued to work on site and became the eyes and ears of the production line, monitoring every production process. He maintained this pace for 31 months until the project was finally approved.

In 2007, Nikiforovich developed a new structure of PTFE cracking furnace, which not only increased the capacity of the plant, but also greatly reduced energy consumption. Under his leadership, Juhua has always been in the front line of scientific and technological innovation. The granulation materials developed by Juhua have been recognized as national key new products, and its dispersion resin has passed FDA and EU qualification certification, eliminating the gap in China's fluorine chemical development.

Building a bridge of cooperation

In 2005, Nikiforovich retired at the age of 74. He was subsequently appointed as the technical director of the Juhua Zhejiang Jusheng Fluorine Chemical Co. to help deal with technical challenges.

Nikiforovich's dedication in Sino-Russian cooperation in the fluorine chemical industry is legendary and he had a hand in many projects. On May 19, 2001, the first enterprise- oriented and market- oriented Sino- Russian Science and Technology Cooperation Park was opened in Juhua. As of 2019, China and Russia had successfully carried out more than 10 projects there; on June 18, 2011, the Juhua Group Corporation signed a contract with the Russian Scientific Center of Applied Chemistry to set up joint R&D centers and experimental bases in St. Petersburg and Zhejiang Province respectively.

On December 8, 2000, Nikiforovich received his Chinese Green Card - Permanent Residence Permit for Foreigners - from the Ministry of Public Security. "The people here are the friendliest and the most credible. I have worked with Chinese builders for more than 20 years and the time I have spent in China will be the most valuable treasure of my life," he said.

Traditional Eastern Wisdom

Bi Sheng, the Inventor of Movable Type

By LONG Yun

Before the invention of printers, books had to be written by hand and then duplicated by hand in order to be mass- produced. It not only took time and was laborious, but also during the process was easy to make mistakes. With the development of the movable type, everything changed.

The *Dream Pool Essays*, a Chinese classic, written by Shen Kuo who was a famous scientist in Song Dynasty, contains a detailed discussion of the printing technology of Bi Sheng's invention of movable type, which changed the way printing was done in ancient China and made printing more efficient.

According to Shen Kuo's records, Bi's invention started from creating clay types for each of the Chinese characters, which were then hardened by fire. A square iron sheet was prepared for typesetting using a layer of resin, wax, and paper ashes mixed and spread on it. An iron frame was then used to encircle the mixture. When the frame was packed, a plate was complete and the mixture was heated until it melted. Meanwhile, a wooden board was used to press the clay types down to the height of the frame, and the plate was ready for printing. Two iron sheets were employed for improved efficiency, one for new typesetting and the other for printing, so that a new plate was ready before the previous one had produced the required number of copies.

To prepare for the repetition of characters on the same page, there were several duplicate types for each character, and there were twenty or more types for certain common characters.

"Bi Sheng's innovation was revolutionary for his time." Shen Kuo said that the method was arduous if only a few copies of a book were to be printed, but it was extraordinarily rapid and efficient if hundreds or thousands of copies were to be printed. However, besides his invention, little is known about Bi's life.

About 400 years later, Johannes Gutenberg invented a machine that used movable type in Germany.

In the history of printing, the invention of movable type was a major technological breakthrough. It has had a tremendous impact on subsequent generations. As a printing method with a long history and heritage, it continues to generate interest.

Bi Sheng is the inventor of movable type.
(PHOTO:VCG)

Photo News

Giant Panda National Park is located in China stretching across Sichuan, Ningxia and Shaanxi provinces. The national park is in development and will encompass 67 existing panda reserves. Nowadays, this park features a population of 1,864 giant pandas. (PHOTO:XINHUA)

Letter to the Editor

Toward a Chinese Eco-civilized Era: Building a Shared Future

By Rami Khalil

After hundreds of years of the industrial revolution and rapid technological development, humanity has reached a moment of crisis in its relationship with nature.

Since I came to China in 2012, I have witnessed the rapid growth of China's economy, and how it increasingly focused on addressing environmental challenges. What amazed me, as a researcher and environmental expert, was the great harmony between the pace of development and the environmental protection and conservation which is rooted in traditional Chinese culture, and which takes humans as an integral part of nature itself, where all beings are equal.

Eco- civilization is best understood as sociotechnical imaginary, in which cultural and moral virtues constitute key components that are inseparable from the more well-known technological, judicial, and political goals. Building an ecological civilization was proposed by the 17th National Congress of the Communist Party of China in 2007, as an innovative way to reconcile economic development and environmental protection. Since 2012, President Xi Jinping has consistently championed its adoption and maturation, describing it as "vital for sustaining the development of the Chinese Nation." The Environmental Civilization has become the general national development strategy and cornerstone of the New Era to sustainable development.

The Chinese government keeps the eco-civilization at the core of all its decisions, using Chinese characteristics to steer China toward the fully eco- civilized destination. The eco- civilization is increasingly presented not only as a response to environmental degradation in China, but as a vision for humanity's global future.

China is among the world's most ecologically diverse countries, with one of the planet's highest concentrations of biodiversity. At a time when the world is struggling to find ways to reverse the trend of biodiversity loss, China has provided a solution: the harmonious co-existence between humankind and nature. China has taken many concrete steps on the environmental front, underpinned by the Eco- civilization philosophy. China initiated an "Ecological RedLine" mechanism, which has given environmental-protection status to no less than 25 percent of its land mass.

China's proposal of drawing a "red line" for ecological protection to mitigate and adapt to climate change has been selected by the UN as one of the

Professor Rami Khalil.
(COURTESY PHOTO)

15 best nature- based solutions around the world. In addition, China will invest 1.5 billion RMB in a new fund to support biodiversity protection in developing countries worldwide.

The country's global green leadership governs the process of transition to an environment friendly development with the following goals:

1. Environment: Environment sensitive and ecological limitation sensitive economy

2. Social: Spiritual and need based development

3. Political: Inclusive, corruption free, moral based and people centered

4. Economy: Prosperity led growth and development

5. Culture: Community, thrift, no waste and care

6. Sharing: Shared destiny, shared future, shared prosperity

Eco- civilization is the KEY to build a beautiful China and achieve the China Dream. The goal of better environment and living cannot be achieved without the active and meaningful participation of society.

The clear vision put forward by President Xi has influenced me and the other environmentalists across the world. We do believe the Eco- civilization is the present's power and future's advantage. It is the right moment to move in the sense of recognizing that we are part of nature.

The world will be grateful to China, not only for the dozens of inventions over the last five thousand years, or providing the world with food and technology, and helping the world during the COVID-19, but also for saving the planet.

Professor Khalil is a professor in Sichuan International Studies University.

Safety Highlighted Throughout Beijing Winter Olympics

Service Info

By Staff Reporters

Han Zirong, a vice president and secretary-general of the Beijing Organizing Committee for the 2022 Olympic and Paralympic Winter Games, highlighted some sections of the second version of the Beijing 2022 Playbook at a press conference on December 24.

Many people are concerned about vaccinations. It will be mandatory for the Beijing Winter Olympics participants to be fully vaccinated at least 14 days before departure to be allowed in to the closed- loop system without quarantine, but athletes and officials may be granted an exemption based on detailed criteria established by a joint panel of medical experts.

It is worthy mentioning that a booster shot for participants is strongly encouraged, although not mandatory.

Moreover, management of the closed-loop system will ensure the safety of participants and the people of China through reducing unnecessary interactions while still allowing them to perform the day-to-day activities essential to their roles during the Beijing Winter Olympics.

Furthermore, COVID-19 liaison officers in all organizations are required to ensure that members understand the anti- epidemic measures, make preparations before traveling to China, and carry out communication and coordination work such as epidemic emergency response.

People involved in the Games should take nucleic tests daily, minimize social activities, wear masks, and avoid closed spaces and gatherings.

When it comes to watching the games, Han stated that organizers would not sell tickets to international audiences in order to prevent the spread of COVID-19 and ensure the safety of all participants.

As to the concerns raised about the safety of the event, Huang Chun, a deputy director of the epidemic prevention and control office of the Beijing Organizing Committee for the 2022 Olympic and Paralympic Winter Games said, "We are confident that these prevention and control measures will reduce the risk of infection and ensure the health and safety of athletes and other participants, the operation of the games, and the health and safety of Chinese citizens."

According to the information released by the press conference, the bottom line of the prevention and control work is to minimize the spread of infection from the closed-loop area to cities.

All arrivals at the venue should adhere to the closed-loop management policy, and they can travel to and from their sites, venues, and workplaces via special buses. However, nobody can be permitted to cross the closed-loop without permission.