

Collaboration Rather than Competition Betters the World

Dialogue

By LONG Yun & BI Weizi

G rard Creuzet, a prominent French physicist and industrialist, recently took time out to share his inspiring journey of collaboration with China. Currently president of the  le-de-France Photovoltaic Institute (IPVF), he has made significant contributions to Sino-French relations in higher education and research.

A decade of commitment
Creuzet, a member of the French Academy of Engineering born in 1953, has been deeply involved in Sino-French cooperation for more than a decade, particularly at Beihang University. His pivotal role in establishing several joint institutions, including the Sino-French Engineering School (Centrale Beijing) and the Sino-French Aviation Institute (ZFAI), has made an indelible impact on enhancing sci-tech exchanges between the two countries.

This year, he received the Chinese Government Friendship Award, the highest distinction granted to foreign experts who have made outstanding contributions to China's modernization drive. From his perspective, this award underscores "the importance of building strong international relationships."

Creuzet travels to China multiple times each year, actively participating in research and student training. "The cultures of China and France are quite similar — both warm and friendly, which reflects the spirit of this award, highlighting the essence of friendship," he said, adding that friendship is a beautiful concept, and he appreciates China for creating this award to emphasize global connections.

A journey of discovery
Reflecting on what sparked his interest in collaborating with China,



Professor G rard Creuzet. (COURTESY PHOTO)

Creuzet emphasized the major factor is the rapid development of the country. In 1978, when he was a young researcher, he focused on partnerships with prestigious institutions in the U.S. and did not consider China. However, the situation has changed dramatically. "Now, China is evolving so fast and it's impossible to think about the world without considering it," he said.

Creuzet's professional journey spans various phases, from researcher to industrial executive. By 2005, he was the chief operating officer of the EDF Group. A friend and colleague, who was retiring, approached him with a project about international training exchanges that had great academic potential but many financial and administrative challenges. Creuzet, however, was fully aware of the project's tangible benefits and instinctively knew they would be achieved through cooperating with Chinese institutions.

Armed with a wealth of experience and international connections, he was

led to Beihang University, a prestigious Chinese university, where he collaborated with many Chinese scholars, including Huai Jinpeng, the university's chairman at the time. "We shared a common goal to train highly skilled engineers who could integrate both French and Chinese cultures and learning modes," he said.

A hybrid educational model
Creuzet's collaboration with Beihang has focused on research as well as innovation in educational form, involving prestigious French Engineering Education organizations like Centrale Group, ENAC and INSA Group. He said there are differences in engineering education between China and France, noting that in China, students often choose their major right away, while French programs emphasize fundamental sciences for the first few years.

By hybridizing their approaches, they were able to integrate basic sciences and personal development training from France with China's technical ex-

pertise. Students begin their education in China learning French and fundamental sciences, and then experience the Chinese sci-tech approach before immersing in the French talent cultivation system.

This hybridization enriches students' educational experiences and respects the cultural differences of both countries, making them more competitive in the job market. Creuzet stressed that cultural integration is essential, emphasizing that, "One should not simply import training methods from one country to another."

A call to the younger generation
However, Creuzet is well aware of the challenges facing the younger generation and urges them to make full use of science and technology. Humanity is confronted with significant challenges, especially climate change, he said, "The solutions to these challenges are closely related to science and technology," he added.

"Be patient," he said, encouraging young people to understand that while these solutions may not yield immediate benefits, they are essential for a sustainable future. "I've been impressed by the intelligence and open-mindedness of young Chinese students," he said, adding they understand that their key roles are to shape a collaborative future.

Creuzet envisions a world where people work together rather than compete against each other. "If we continue to foster exchanges, where I visit China regularly and Chinese students come to Europe, we will build a foundation for cooperation," he said. "While competition is natural, prioritizing friendship and collaboration is more crucial."

His insights and experiences not only highlight the potential for international cooperation, but also inspire the younger generation to embrace technological advancements for a better future.

My China Story

A Korean Witnesses Transformation in Anhui

By Staff Reporters

"Hello, I'm Sojin Kim. Welcome to Xiaoxian county. It's a pleasure to meet you!" Kim's greeting is accompanied by a warm smile, his fluency in Chinese adding to the sincerity of his words. Kim, who became CEO of Hualong Refractory Materials company in Xiaoxian county, Anhui province, in 2007, has helped transform the local industry and foster a spirit of innovation in an area not known for its economic advantage.

Kim told *Science and Technology Daily* that when he first arrived in Xiaoxian from South Korea, the company, whose products include composite magnesium carbon bricks, was struggling, and the region was still developing.

However, he was undeterred by the challenges. At that time, the county was building a new economic development zone, with the local government being very supportive of business growth, especially in environmental improvement and infrastructure development. His optimism was bolstered by the supportive atmosphere within the research team and the dedication of his colleagues and workers.

Over the years, Kim has seen a shift in Xiaoxian county's technological landscape. "We have bright futures as long as a city values technological innovation," he said. With the support of the local government, he assembled a research and development team focused on cutting-edge technologies, which led to the application of over 10 national patents and propelled his company to the second rank in research and development capability in Anhui province, a region well known for its innovative capacity.

At the same time, the company's annual output value skyrocketed from a few million RMB to over 100 million RMB in just a few years, gaining a foothold in international markets. After 2016, Hualong Refractory Materials expanded from domestic sales to exports, reaching customers in Germany, Australia, Russia, and



Sojin Kim. (COURTESY PHOTO)

many other countries.

Kim has now lived and worked in Xiaoxian county for more than 17 years. He appreciates the beautiful mountains, rivers, and rich culture of the area. "I love this land and have decided to focus on my research here," he said. In 2018, he took a significant step by applying for permanent residency in China, officially settling in Xiaoxian county. "With such a favorable environment for technological innovation, I am determined to contribute to its development as 'a new Xiaoxian person'," he said.

Looking ahead, Kim aims to lead his team in pushing the company towards an initial public offering and establishing a first-class research institute for refractory materials in China. He emphasizes prioritizing new product development, technological innovation, and talent acquisition for high-quality corporate growth. By continuously researching market demands, his team develops products that meet those needs while ensuring timely patent applications.

Kim is looking forward to a trip back to South Korea to reunite with old friends in the near future. "I'll take some Chinese white wine and local delicacies back. My friends are all very envious of my experiences here," he laughed.

Xiaoxitian Temple: A Trove of Chinese Suspended Sculpture

Traditional Eastern Wisdom

By Staff Reporters

In Chinese Buddhist statue art, suspended sculpture is a relatively uncommon form of art. Suspended sculptures are typically supported by walls or beams, with colorful sculptures hanging on fixed wooden frames.

By using a technique in which the sculptures are thicker at the top and thinner at the bottom, their three-dimensional effect is enhanced so that viewers can appreciate the vivid artistry from any angle. The various figures in different postures such as leaning, overlooking, jumping and flying, create a sense of realism.

The suspended sculptures at the Xiaoxitian Temple in Shanxi province in north China are a treasure trove of the art in terms of content, scale, and artistic merit.

Suspended sculptures are often richly colored for an enhanced visual effect. Gold foils are used extensively at the Xiaoxitian Temple, not only adding a sense of grandeur but also symbolizing the light of Buddhism.

In an area of under 170 square meters, there are 1,673 statues and intricate Buddhist scenes at the temple. The statues range in height from a towering 3.2 meters to as tiny as the little finger, depicting most of the major figures and scenes mentioned in Buddhist scriptures.

The figures and scenes are detailed, with every detail meticulously presented

by skilled craftsmen, from the flowing folds of robes to the subtle facial expressions, all revealing an extraordinary aesthetic sense.



The suspended sculptures at Xiaoxitian Temple in Shanxi province. (PHOTO: VCG)

When illuminated, these suspended sculptures appear to be endowed with life, radiating a mysterious and solemn aura.

Grand Water Diversion Project Transforming Lives

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By adhering to a strategy of "pollution control before water diversion" and "environmental protection first," local authorities and communities along the route actively participate in water source protection. This community involvement is crucial to sustaining high water quality, with Danjiangkou consistently maintaining a Class II rating — water suitable for drinking after appropriate cleaning.

The eastern route has also seen remarkable improvements in environmental conditions. The previously polluted Nansi Lake, a major transit lake on the route, has undergone substantial ecological restoration, transforming from an algae-dominated lake to a clean water source, now supporting various bird species. Water drawn from this route is regularly monitored at over 36 critical points.

In addition to supplying safe drinking water, this clean water flow is helping revive ecosystems in dried-up rivers, lakes, and wetlands. The project's commitment to ecological protection has turned these water channels into lifelines, not just for cities but for regional biodiversity as well.

A foundation for balanced national growth

The South-to-North Water Diversion Project is more than a public utility; it is a strategic resource for balanced development across China. Its infrastructure ensures water access for critical regions like the Beijing-Tianjin-Hebei cluster and the Xiong'an New Area, facilitating regional collaboration and economic growth.

It also bolsters food supply by supporting agricultural productivity in water-scarce provinces. In Shandong, for example, the steady water supply has enhanced grain production and, with improved irrigation, supported specialty industries such as vinegar production in Henan's Baofeng county.

Beyond agriculture, the water transfer project promotes efficient resource distribution, optimizing water availability for energy bases, economic zones, and urban centers.

It facilitates smoother connections within the domestic economy, illustrated by improved shipping conditions along the Beijing-Hangzhou Grand Canal. Enhanced water flow supports year-round navigation, allowing ships carrying thousands of tons of cargo to operate continuously between northern ports and the Yangtze River. This logistical improvement has reduced the economic burden of water shortages, enhancing the efficiency of China's north-south economic circulation.

As China continues its modernization efforts, the South-to-North Water Diversion Project stands as a testament to the nation's capacity for engineering innovation and strategic planning.

With new phases underway, including plans to enhance the middle route's capacity and initiate the western route planning, China's water network will further strengthen, supporting the nation's journey toward becoming a strong, prosperous, and ecologically balanced country and ensuring a sustainable future for all.

Fruit Flies' First Space Odyssey Aboard Shenzhou-19

Science Outreach

By Staff Reporters

On October 30, China successfully launched the Shenzhou-19 crewed spaceship, sending three astronauts to its orbiting space station for a six-month mission.

The trio will conduct a series of experiments in fields such as life science, fluid physics, combustion science

and materials science. Notably, this is the first time that fruit flies have been taken on a Chinese space mission as experimental subjects. What made scientists choose fruit flies? What experiment will they undergo?

Fruit flies are important model organisms as despite being tiny creatures with a body length of only 3 to 4 millimeters, many of their genes are similar to human genes. Therefore, studying fruit flies can provide insights into human mechanisms and lay the foundation for investigating human adaptability in space.

For instance, by studying the

changes in the muscles and exoskeleton of the fruit fly in a microgravity environment, scientists can gain better understanding of the challenges faced by astronauts during spaceflights. Additionally, studying the heart of the fruit fly in space can help reveal the potential effects of long-term exposure to microgravity on cardiovascular function.

Moreover, fruit flies have a reproductive cycle of approximately 10 days, enabling them to produce a large number of offspring in a short period. This characteristic will enable researchers to study gene changes in the species across multiple generations in space, making

genetic experiments more convenient.

Earth has a magnetic field, while many other planets have none or extremely weak ones. The astronauts will also establish a sub-magnetic environment in the space station to explore the behavioral patterns, growth, and development of organisms in a weaker magnetic field environment. This will provide valuable data for future lunar and Martian landing missions.

In the future, with more advanced experiment equipment and technologies, the Chinese space station will conduct more complex experiments using mice, advancing space biology research.