

Dialogue

Passion Trumps Challenges

By LONG Yun & BI Weizi

Thomas Meier, a young German scientist from the Center for High-Pressure Science & Technology Advanced Research (HPSTAR), delivered a vivid science outreach lecture on high-pressure science, which resonated with audiences of all ages. Despite its complexity, Meier used his humor and creativity to bring the subject closer to the audience.

Dedicated to high-pressure science
"High-pressure science is the study of matter under extreme conditions," Meier told *Science and Technology Daily*. High-pressure science plays a crucial role in modern solid-state physics and materials science. Meier's primary research focuses on developing and implementing high-frequency solid-state spectroscopy in diamond anvil cells (DAC). DACs, equipped with two flattened diamond tips, enable scientists to create extreme conditions similar to those found in the center of Earth.

Meier's research involves finding ways to extract more detailed information from high-pressure samples by implementing a method called Nuclear Magnetic Resonance (NMR) in DACs. NMR, a widely used spectroscopic method in various scientific disciplines, including medical imaging, is relatively unexplored in high-pressure science.

Basic science matters
When asked about the impact of his work on social development, Meier acknowledged that it is difficult to predict direct social influence stemming from basic scientific research. However, he emphasized that the pursuit of knowledge and understanding serves as



Dr. Thomas Meier. (PHOTO: S&T Daily)

a driving force behind social development. Meier firmly believes that basic science plays a vital role in broadening our understanding of nature and the world, even if their practical implications may take decades to materialize.

Regarding the challenges faced within his professional field, Meier said that high-pressure science, a multidisciplinary field often perceived as a joint effort of various disciplines, presents additional obstacles for researchers. As a result, nurturing a successful career entails seeking recognition and support from counterparts in the field.

Meier enjoys his academic journey in spite of the challenges. "Passion will always trump good grades," he said. He encourages the younger generation to be

driven by passion rather than focusing solely on grades or rote memorization. As he mentioned in his speech, while academic achievements and knowledge hold value, true success in the science field stems from deep curiosity and a passion for exploration.

Academic journey to the East
Two years ago, this German scientist embarked on a journey to China, taking up a position as a staff scientist at the HPSTAR. Reflecting on his first impressions of the country, he said, "China struck me as a country with a rich and profound history," adding that the sense of safety on the streets and the convenience of life are "exceptional and almost unrivaled throughout the world."
Meier chose HPSTAR due to its

global reputation as a leading high-pressure institution and the exceptional research environment it provides. "At HPSTAR, we receive all the necessary support to fully develop in our respective fields," he said, expressing his satisfaction and fulfillment with his experience at the centre.

China, an integral part of promoting global progress

As a foreign expert working in Beijing, he recognizes China's endeavor to build the city into an international sci-tech innovation hub as a significant contribution to the advancement of science and technology. From his professional perspective, the establishment of research institutes like HPSTAR, and the upcoming synchrotron facility, showcases China's efforts to become a world-class player in high-tech research and development, on par with developed countries such as Germany, UK, and the U.S.

Science sees no borders. According to Meier, China's research institutes actively engage in the international scientific community, participating in collaborative research projects. He emphasized that scientific advancements are now inherently global endeavors. "Multinational collaborations are absolutely crucial for groundbreaking discoveries," he said.

Meier applauded Chinese research institutes making efforts in advancing international scientific progress. "China will play a significant role in scientific discoveries and advancements in the coming decades," he said.

This article is also contributed by LI Xiang from Foreign Talent Research Center, MOST.

CPC Leads Xizang to Prosperity

Letter to the Editor

By Ershad Shikdar

I recently returned to Beijing after wrapping up my week-long tour to Xizang, an autonomous region of China. I visited many religious, historic, and cultural places and basked in the stunning natural beauty of the region, known as the "Roof of the World." During the visit, I came across people from all walks of life in southwestern China.

The visit has helped me to realize why it is impossible to say anything about Xizang without mentioning the Communist Party of China (CPC). I have seen for myself how the CPC has brought prosperity to Xizang, which has always been an integral part of China throughout history.

In bringing prosperity to the region, the CPC has won the hearts of the local people. I was impressed to see that in just six decades, the CPC has brought sweeping changes in the fields of economy, society, and people's livelihood in the region.

Thanks to the all-out efforts made by the CPC, Xizang's GDP has grown 300-fold, the rural per capita disposable income has increased 400-fold, and its average life expectancy has doubled to 72 years from only 35 years.

Throughout my travels there I saw firsthand how the people have realized the goal of a happy and moderately prosperous life. And this has happened in just four decades of reform and opening up. As a result, Xizang was uprooted from abject poverty in 2019, while China lifted all of its citizens out of poverty one year later in 2020.

Colleagues in my traveling group from different countries shared my views on the vast development of Xizang. I have cited the views of two scholars as typical of those of our foreign visiting group.

Muhammad Asghar, a special correspondent of the Associated Press of Pakistan, first visited Xizang in 2018. Comparing Xizang now and five years ago, he said the size of urban Lhasa has now been expanded, and the socioeconomic

development and people's livelihood are on a new level today.

He thinks Xizang has built better infrastructure in transport, health, and education. The comprehensive development of the region proves that no ethnic group will be left behind as China embarks on a new journey to build itself into a modern socialist country in all respects.

During the trip, Vikash Kumar Singh, an Indian teacher at Beijing Foreign Studies University, closely observed the life of the Xizang people. The visit has helped him understand that the CPC has long been improving the infrastructure, education, and healthcare system, and the people enjoy autonomy and religious freedom in the region.

He observed that Western media has always been biased about Xizang people's freedom of religious beliefs and customs. However, statistics show that millions of Xizang people go to the local temples during their religious and traditional festivals. And the CPC has long been paying particular attention to respecting and protecting religious beliefs and customs in Xizang.

Everyone I interacted with during my visit believes that the CPC has brought prosperity to Xizang, which was a feudal serf society before 1951. The democratic reform undertaken by the CPC abolished serfdom and enabled one million serfs to master their own life.

The CPC liberated the serfs of Xizang on March 28, 1951. However, the party has never forgotten its core goal of serving the people of Xizang. The party carried out widespread democratic reform and led Xizang to where the region is today. In the process, the CPC has built Xizang to match up to the expectations of the people.

Finally, I believe the CPC has quickly and effectively improved the fate of Xizang and its people. The party first led Xizang and its people from slavery to liberty and now to prosperity. And I firmly believe that Xizang will continue its journey toward peace and prosperity under the pragmatic and humanistic leadership of the CPC.

Ershad Shikdar is a Bangladeshi journalist working in China.



The picture shows the beautiful view of Yamdrok Lake in southwest China's Xizang Autonomous Region. (PHOTO: Ershad Shikdar)

Facts about Vitamin D Supplements

Science Outreach

By PEI Chenwei & BI Weizi

Many people are looking into supplementing various nutrients as they become more health conscious. Some are concerned that vitamin D deficiency may cause diseases, while others believe that too much vitamin D can have a detrimental effect on their livers.

To clear up the facts about this vi-

tamin, *Science and Technology Daily* talked to Rong Shuang, director of the Department of Nutrition and Food Hygiene at Wuhan University.

Vitamin D deficiency can cause many diseases

"Vitamin D contributes to bone health, and it can regulate blood calcium balance and maintains normal blood calcium concentration," said Rong, adding that low vitamin D levels in the body are associated with many diseases, such as hypertension, tumors, diabetes, cardiovascular and cerebrovascular diseases.

Vitamin D deficiency is a global problem. *The Scientific Research Report*

on *Dietary Guidelines for Chinese Residents (2021)* states that in 2016-2017, the prevalence of Vitamin D deficiency among children and adolescents aged 6-17 years in China was 18.6 percent, and in 2015 deficiency among adults aged 18 years and older was 21.4 percent.

In most people, vitamin D deficiency affects bone calcification, causing mineral abnormalities in the bones and teeth. Infants and children who lack vitamin D are susceptible to rickets; pregnant women are often diagnosed with osteochondrosis if they do not get enough vitamin D, and the elderly are susceptible to osteopo-

rosis, which in turn increases their risk of fractures.

Too much vitamin D is bad for your health

Regular sun exposure is the most effective way to replenish the body with vitamin D. Rong recommends spending 10-20 minutes in the sun every day at 9-10 a.m. or 4-5 p.m.

However, too much vitamin D can cause many side effects, including lack of appetite, weight loss, nausea and vomiting, said Rong, adding that it's a good idea to check the Chinese Dietary Guidelines before taking vitamin D supplements.

Cultural Heritage Protection More Important than Showcase

By LONG Yun

The main event of the 2023 Cultural and Natural Heritage Day, with the theme of "Conservation and Utilization of Heritage and Cultural Confidence," was held



Professor Olga Pronkina sits by the Crescent Spring of Dunhuang, Gansu province. (COURTESY PHOTO)

in Chengdu, Sichuan province, on June 10.

Regarding the theme of this year's event, Olga Pronkina, an expert from Russia who has been working on Dunhuang studies in China for nearly a decade, shared her perspective on the Dunhuang culture, international cultural exchange and heritage conservation with *Science and Technology Daily* recently.

Pronkina said she has been actively involved in promoting cultural exchanges between China and foreign countries, adding that such exchanges play a crucial role in fostering cultural confidence and strength. She highly values the importance of each country and ethnic group inheriting their own traditional culture, while continuously exploring and understanding the excellent cultures of other countries and ethnic groups.

When it comes to the balance between preservation and utilization in the process of cultural heritage protection, Pronkina highlighted the significance of showcasing cultural heritage as an essential means of reaching out to the public, which enable the public to understand artifacts, connect with history and immerse themselves into diverse cultures.

At the same time, she stressed the primary focus should be on protection rather than exhibition. She sug-

gested leveraging digital technology to showcase cultural heritage, as it can better protect artifacts and ensure their long-term cultural and historical significance.

In terms of technology's role in preserving and promoting Dunhuang culture, Pronkina mentioned the "Digital Dunhuang" project, an interactive digital platform of a virtual duplication of the Library Cave in Mogao Grottoes, was accessible to the public from April 2023. She praised the project as a successful integration of cultural heritage and technology, enhancing visitors' experience and connection with Dunhuang art.

Nevertheless, Pronkina pointed out that the project may not fully satisfy children's curiosity and thirst for knowledge. To deepen children's understanding of Dunhuang culture, she suggested establishing cultural workshops or laboratories in public educational institutions. For example, allowing children to personally replicate Dunhuang murals or engage in embroidery with the inspiration from Dunhuang murals would provide a more immersive experience.

She also emphasized that the cultural heritage of Dunhuang, with its more than a thousand years of history along the ancient Silk Road, has provided valuable historical and cultural assets for modern society.

One-stop Service for Expats in Kunming

Service Info

By Staff Reporters

Recently, Yunnan province's first pilot zone for "one-stop service" for foreign experts' work and residence permits was officially launched in Kunming.

According to a staff member from the pilot zone, in the past, foreign experts had to obtain a work permit before applying for a residence permit, and they had to go to two departments and submit two applications, which took

nearly 20 working days. Now, applicants only need to submit one set of application documents, which only takes 10 working days before receiving all permits.

This pilot zone is the first of its kind in Yunnan province and will provide a professional and fast "one-stop service" for high-level foreign experts. In addition, translators are available for international experts to provide multi-lingual one-on-one business consultation, declaration consultation and permit services, thus eliminating language barriers and improving communication efficiency.