MONTHLY REPORT

2026.06 University of Science and Technology of China

第18期



Abstract ◎ Research ◎ News ◎ Alumni

RESEARCH

Jun. 02

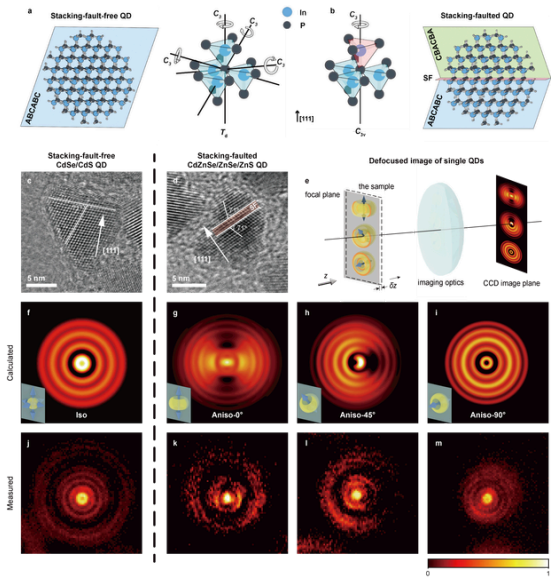
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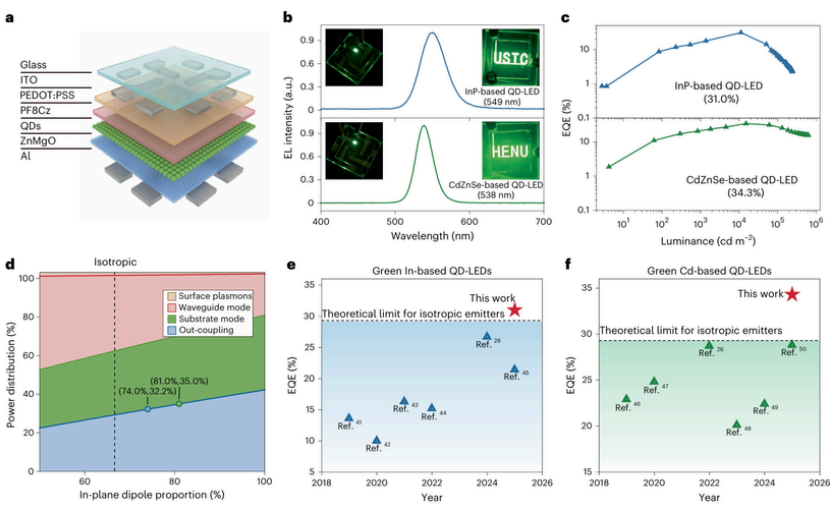
USTC achieves directional emission from zincblende quantum dots via crystalline symmetry breaking

Recently, a research team led by Prof. Fan Fengjia from the Spin Magnetic Resonance Laboratory at USTC, in collaboration with Prof. Shen Huaibin, Prof. Zeng Zaiping, and Associate Prof. Wang Lei from Henan University, has made significant progress in the study of directional light emission from quantum dots.

The team discovered for the first time that introducing stacking faults into zincblende quantum dots can break the crystal's inherent symmetry, enabling efficient directional light emission in quasi-spherical zincblende quantum dots—a phenomenon previously considered unattainable due to their isotropic nature.

The related findings, titled "Crystalline symmetry breaking enables directional light emission in quantum dots," have been published in the international academic journal ***Nature Photonics***.



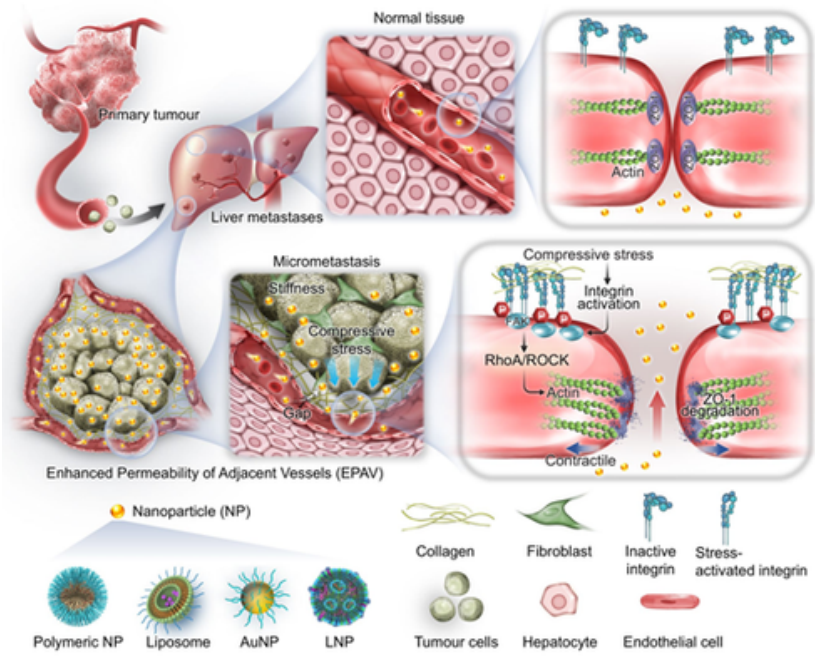


RESEARCH

Jun. 19

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USTC Proposes EPAV Effect, Updating EPR Theory for Nanodrug Delivery



Recently, a research team led by Prof. Wang Yucai and Prof. Jiang Wei at the University of Science and Technology of China (USTC) published a study in ***Nature Nanotechnology*** titled "Nanoparticles reach metastatic tumours via enhanced permeability of adjacent vessels."

The study proposes a novel nanoparticle drug delivery paradigm distinct from the classical Enhanced Permeability and Retention (EPR) effect—namely, the Enhanced Permeability of Adjacent Vessels (EPAV) effect. The findings reveal that early micrometastases are not isolated "islands" inaccessible to nanomedicines; rather, they establish unique transport pathways through adjacent normal blood vessels.

These findings not only provide a novel theoretical framework for understanding the in vivo behavior of nanomedicines in early metastatic foci, but also open up new avenues for the early diagnosis and precision treatment of cancer micrometastases, as well as the design of next-generation nanodrugs.

NEWS

Jun. 10

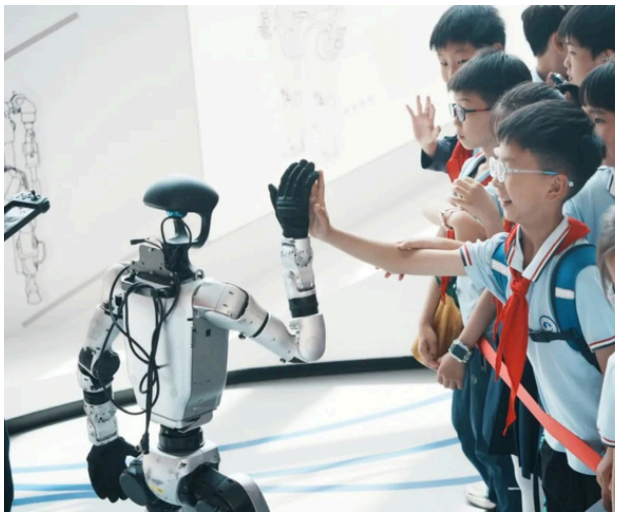
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USTC Science Week

This year’s USTC Science Week featured 168 hands-on projects across 40 outreach venues, attracting more than 23,000 visitors eager to experience the excitement of science.

Visitors explored the frontiers of quantum science through expert talks, tackled brain-teasing challenges including traditional Chinese Luban locks, and discovered the fascinating world of photonics through interactive optics games. The excitement continued with immersive VR fire-rescue simulations and live biology demos where visitors made their own leaf-vein bookmarks.

One standout attraction was the robot chemist “Xiao Lin”（小临）from the State Key Laboratory of Precision and Intelligent Chemistry, which interacted with visitors and offered a glimpse into the future of AI-powered scientific research.





NEWS

Jun. 22

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Anhui Cultural Study Tour



Recently, our international students joined the 2nd International Huangshan Huizhou Cultural Co-creation Camp & the 14th Anhui Cultural Study Tour, gathering with over 300 international students from universities across Anhui.

They wandered the Qiyun Mountain to immerse themselves in time-honored Taoist culture. Everyone enjoyed making classic fish lanterns and took part in the lively Fish Lantern & Bench Dragon Intangible Cultural Heritage Parade. The group also visited Huangshan, one of China’ s most famous scenic mountains, to soak in its breathtaking natural views.

At Xidi Ancient Village, they explored the profound charm of Huizhou culture, tried intangible cultural heritage paper-cutting, and learned about the timeless virtue of filial piety.





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Rakotondrasoa Sahaza Delis



SL20025001

School of Humanities and Social Sciences

Madagascar

Rakotondrasoa Sahaza Delis is an outstanding alumnus from Madagascar and a recipient of the Anso Scholarship. He came to China in 2016 and later earned a Master's degree in Science Communication from the University of Science and Technology of China in 2024. Currently, he works as a scientific photographer with the SciVisual team in Hefei, documenting China's major scientific facilities and innovations, including the EAST "Artificial Sun," the BEST fusion device, the LHAASO observatory, and the "Zuchongzhi-2" quantum computer. Through his photography, he transforms complex scientific achievements into compelling visual stories for global audiences.

His work has received wide recognition, earning awards in national science communication and digital media competitions, as well as honors from the Chinese Academy of Sciences. In 2025, he won Third Prize in the Chinese-language category of the Third Anhui Story Sharing Contest for Foreigners. Featured by major media outlets such as China Media Group, China News Service, and China Daily, Sahaza Delis has become an inspiring international communicator who uses photography to showcase China's scientific progress and strengthen people-to-people exchanges between China and the world.

Capturing the Beauty of Chinese Science Through the Lens

— My Journey with the University of Science and Technology of China

I. A New Chapter in Hefei

In September 2016, I set foot on Chinese soil for the very first time. Leaving my distant homeland of Madagascar, I arrived in Nanchang, Jiangxi, to study Teaching Chinese as a Foreign Language at Jiangxi Normal University. Studying abroad had been my greatest dream since high school. In my country, many students choose to pursue further studies in France, but I always felt drawn to a different path.

It was my high school principal who encouraged me to consider China. She told me that Mandarin would become one of the world’s most important languages and that mastering it would open countless doors. At that time, the Confucius Institute had just been established in Madagascar. I studied there for a year and a half and was eventually awarded the Confucius Institute Scholarship, which brought me to China.

The true turning point in my life came in 2020, the day I arrived in Hefei and was admitted to the University of Science and Technology of China (USTC).

II. Pursuing Passion with Support

During my undergraduate years, I discovered a passion for photography and video production. I participated in several film competitions and was fortunate enough to win awards. As graduation approached, I became increasingly certain that I wanted to continue on this creative path. Coincidentally, USTC had just launched its Master’s program in Journalism and Communication. Summoning my courage, I submitted my application.

Shortly after, I received an email from my future supervisor, Professor Zhang Yanxiang, requesting a research proposal. To this day, I still remember the surge of joy upon receiving his reply. Even more fortunately, I was awarded the ANSO Scholarship (Alliance of International Science Organizations). This scholarship not only funded my master’s studies but also allowed me to explore my passion here in China with peace of mind. For this, I will forever be grateful to USTC and the Chinese Academy of Sciences.

III. The Warmth of Science

My time at USTC taught me that science is far more than formulas and data confined within laboratory walls; it possesses warmth, emotion, and beauty.

During my master’s studies, I joined the “Investigation of Handmade Paper” project—a niche field often referred to as a "cold rarity" in academia. We traveled across China, documenting the lives and cultures of artisans who still practice traditional papermaking techniques. My supervisor and I were responsible for visual documentation, utilizing photography, videography, VR, and 3D scanning technologies to digitally preserve these crafts.

Later, I joined the “In the Lab” Science-Art Photography Project led by Professor Liang Yan. This experience transformed me completely. As a humanities student, I had never truly stepped into a scientific laboratory. “In the Lab” gave me repeated opportunities to enter previously inaccessible spaces: large-scale experimental apparatuses, national key laboratories, and cutting-edge research platforms. For the first time, I realized that science could be so shocking and so romantic. It is not merely cold technology; it is an imagination of humanity's future.

It was then that I fell in love with "Science Photography."

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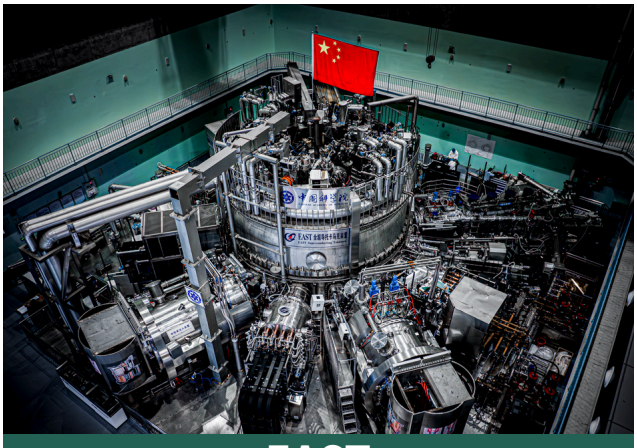
IV. Witnessing the "Artificial Sun"

I have photographed many major national scientific facilities, but none left a deeper impression on me than EAST—the Experimental Advanced Superconducting Tokamak, known to the public as the "Artificial Sun."

As a child in Madagascar, I had heard rumors that China was researching an "Artificial Sun." Never did I imagine that one day, I would stand before this colossal device and document it with my own hands. When I first walked onto Science Island and saw EAST, I gasped involuntarily: "It’ s so huge!"

The massive mechanical structures, the intricate precision equipment, and the profound human quest for future energy filled me with indescribable awe. Knowing that this device must withstand temperatures close to the core of the sun, I developed a deep reverence for the scientists working silently behind it.

The moment I raised my camera, I realized: perhaps my mission is to use visual storytelling to bring this invisible world of science to the public. Subsequently, I participated in filming projects for the LHAASO Cosmic Ray Observatory and the Meridian Space Weather Monitoring Project. Every shoot felt like entering another universe.



EAST



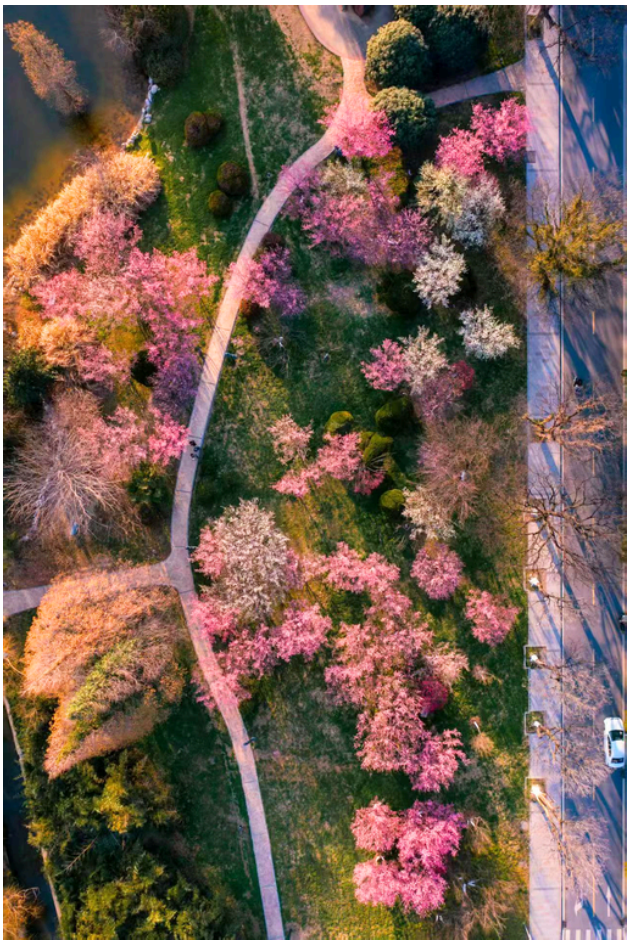
LHAASO

V. Embracing Culture and Life

Beyond science, I fell deeply in love with Chinese culture and daily life. During my years at USTC, I won the "Activity Participation Award" from the International College for two consecutive years. Whenever I had time, I signed up for cultural events.

I paddled dragon boats, learned paper-cutting, danced Chinese classical dance, visited new energy enterprises, marveled at China’s highest bridges, and even made kites by hand. These experiences taught me that Chinese culture is not just a concept in textbooks, but a lifestyle to be lived.

To me, the most beautiful aspect of USTC is spring. Being a lover of nature, the campus cats, flowers, and trees often become my "dedicated models." The Cherry Blossom Avenue, blooming every year, is a view I can never tire of capturing, even after all these years.







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VI. Recognition and Shared Success

Over the years, I have been fortunate to receive several accolades. I won First Prize in the "Quantum Information and Quantum Technology" Science Popularization Competition and received awards at the CAS Science Popularization Competition for two consecutive years. I also earned honors in the National College Digital Art Design Competition.

One of my award-winning works was a documentary on handmade papermaking filmed in Yunnan and Sichuan, where we used digital technology to aid in cultural heritage preservation. Later, I participated in the Third "Foreigners Telling Anhui Stories" Contest, sharing my experiences photographing the EAST and BEST devices in Chinese, winning third prize in the Mandarin category.

The most unexpected honor was being interviewed by CCTV News for their "Xinwen Zou Jiceng"(News Goes to the Grassroots) series. Seeing my story featured on national media filled me with pride, but I am acutely aware that these honors do not belong to me alone. They belong to the "SciVisual" team, to USTC, to my mentors, and to my fellow partners. Without them, there would be no me today.





VII. Profession with Virtues, Mind with Hands

USTC’ s motto is "Profession with Virtues, Mind with Hands" (Hong Zhuan Bing Jin, Li Shi Jiao Rong). As an international student, my understanding of this phrase evolved gradually.

Through my involvement in science photography and cultural research, I came to understand that "Mind with Hands" is not just about combining knowledge with action; it means science can step out of the lab and connect with art, culture, and society. "Profession with Virtues" represents a sense of responsibility. It made me ask myself: Can I, as a communicator, use my skills to tell the story of science to the world?

USTC did not train me to be a scientist, but it showed me that science and art can walk hand in hand, and that rationality and passion can coexist. This is perhaps my greatest harvest here.

VIII. A Second Hometown

Today, Hefei has become my "second hometown." Over the years, I have witnessed this city grow exponentially: expanding subways, soaring bridges, and breakthroughs in nuclear fusion, quantum technology, and new energy. It is a city brimming with futuristic vitality. And I hope to continue using my lens to document the China I see.



ALUMNI

IX. A Message to Future Scholars

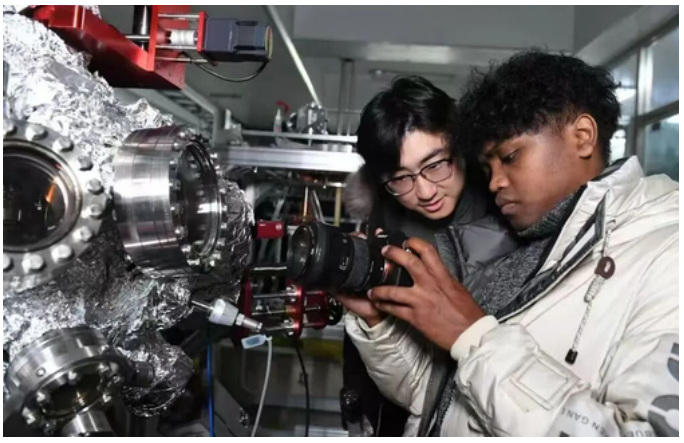
If I could say one thing to young people hoping to apply for the ANSO Scholarship and study at USTC, it would be this:

Apply boldly, and cherish it earnestly.

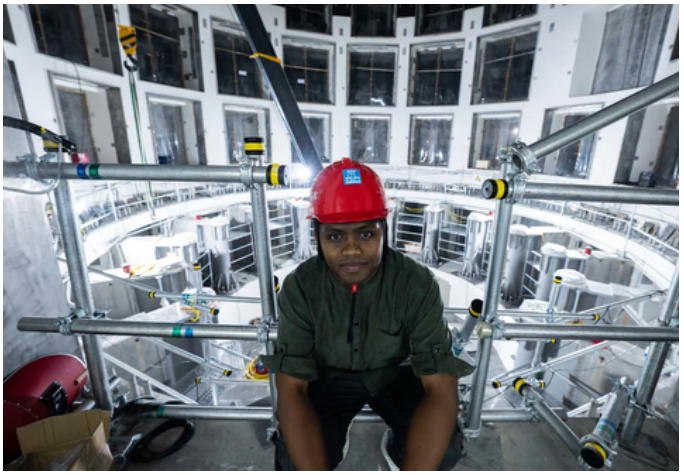
I, too, crossed an ocean to come to China starting with a scholarship. From a humanities student who knew almost nothing about science, to someone standing before the "Artificial Sun," recording the stories of Chinese science through the lens. The journey was not easy, but USTC gave me the confidence to pursue it. Here, you will discover that science is more than formulas and data; it can be seen, touched, and expressed through art.

A scholarship is never just a ticket. What matters most is that it leads you to a broader world.









SHARE YOUR STORY !

WHAT YOU CAN SHARE

including but not limited to

- CAREER & RESEARCH
- LIFE AFTER USTC
- ENTREPRENEURIAL VENTURES
- CROSS-CULTURAL EXPERIENCES
- MEMORABLE USTC MOMENTS

FORMATS

- ARTICLES OR ESSAYS
- PHOTO STORIES
- SHORT VIDEOS
- INTERVIEWS

SUBMIT NOW!

intlalumni@ustc.edu.cn

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University of Science and Technology of China