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Headquarters of the International Science and Technology Organizations inaugurated in Beijing



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Headlines

Headquarters of the International Science and Technology Organizations inaugurated in Beijing

On May 31, 2023, the Headquarters of the International Science and Technology Organizations was unveiled in Beijing's Chaoyang District. The landmark development, a collaborative effort between the China Association for Science and Technology (CAST) and the Beijing Municipal Government, marked a significant step towards bolstering the growth of international science and technology organizations in China.

The Headquarters has already attracted eight prominent organizations including the International Society of Zoological Sciences (ISZS), the International Society for Digital Earth (ISDE), and the International Hydrogen Fuel Cell

Association (IHFCA), to open offices. It also offers open working space for liaison offices of non-governmental and international scientific and technological organizations operating in Beijing. The goal is to progressively encourage the presence of more organizations, along with operational offices, in the area.

These international organizations are crucial for promoting global common values in science and technology. They act as vital conduits for connecting global resources and advancing development. CAST is driven by a commitment to supporting such organizations, especially those led by Chinese scientists. It aims to build an open and inclusive hub for innovation and enhance openness, trust, and collaboration in the international community. The inauguration of the Headquarters in Beijing created an enabling environment for these organizations

to maximize spatial, communication, personnel, and operational synergies.

(Source: chinanews.com)

CSE International Advisory Committee holds its first meeting of the year

On May 26, 2023, the Chinese Society of Engineers (CSE) International Advisory Committee convened its first meeting of 2023 in hybrid mode. Sixteen committee members from Asia, Europe, the Americas, Oceania, and Africa participated in the event alongside representatives from the CAST International Affairs Department, the CSE Secretariat, and the Engineering Multilateral Agreement Research Group.

CSE Deputy Secretary-General Zhang Bin outlined CSE's development of engineering capabilities and its international exchange

programs. The Engineering Multilateral Agreement Research Group offered an independent analysis of China's preparations for affiliation with the International Engineering Alliance (IEA). Committee members then offered suggestions on advancing China's engineering capabilities and the international professional development of Chinese engineers. All participants expressed a shared belief that China, with its massive engineering workforce and extensive practical experience, should work with engineers worldwide to tackle climate change, natural disasters, and other global challenges. Together, they envisioned contributing the collective wisdom and strength of the global engineering community to accomplishing the United Nations Sustainable Development Goals (SDGs).

(Source: Official website of CAST)

Chinese paleogeneticist Fu Qiaomei awarded UNESCO–Al Fozan International Prize for the Promotion of Young Scientists



Fu Qiaomei on stage with Qu Xing, Deputy Director-General of UNESCO, Princess Haifa Al-Muqrin, Saudi Arabia's permanent representative to UNESCO, and Abdullah Al Fozan, chairman of the Al Fozan Foundation
Photo credit: cctv.com

On June 19, 2023, the UNESCO–Al Fozan International Prize for the Promotion of Young Scientists in Science, Technology, Engineering and Mathematics (STEM) was presented at a ceremony at the UNESCO headquarters in Paris, France. Chinese paleogeneticist Fu Qiaomei made history as the first Chinese scientist to receive the prize. The other four recipients came from Argentina, Cameroon, Egypt, and Serbia.

Fu is a senior research fellow at the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP) of the Chinese Academy of Sciences (CAS) and a member of the Standing Committee of CAST. Over the past decade, Fu has led a research team to extract DNA from ancient human remains and sediments. The evolutionary map she has developed records the changes in Eurasian populations over thousands of years. It provides a valuable perspective on the unique gene flow and migration patterns during the Ice Age, offering crucial understanding of how these factors influenced the genetic makeup and adaptive

traits of today's East Asians.

Established by UNESCO in 2022, the UNESCO-AI Fozan International Prize for the Promotion of Young Scientists is a pioneering initiative to promote and reward the efforts of young scientists in STEM fields. It is awarded every two years to five promising laureates. The award not only acknowledges achievements of young people that are conducive to socio-economic transformation and development on a global scale but also aims to spark interest in STEM, particularly among girls and women, to promote gender equality, scientific literacy, and the choice of a scientific career. It applauds achievements at various levels that contribute to capacity building, scientific development, and socio-economic progress, thereby bolstering STEM research, education, and international collaboration to tackle global challenges outlined by the UN Sustainable Development Goals (SDGs).

(Source: Official website of CAST)

China wins 8 gold medals at the Asian Physics Olympiad

On May 29, 2023, the 23rd Asian Physics Olympiad (APhO 2023) came to a close in Ulaanbaatar,



Group photo of the Chinese team at APhO 2023
Photo credit: news.cn

Mongolia. The Chinese team secured eight gold medals, their best performance in nearly half a decade.

The eight members of the Chinese team were handpicked and endured a rigorous training program organized by the Children & Youth Science Center of CAST (CYSCC) and the Chinese Physical Society (CPS). They also received robust support from CAST which contributed significantly to their exceptional performances.

The Asian Physics Olympiad is one of the most prestigious international competitions for high school students. Every contestant must pass multiple rounds including preliminaries, semifinals, and finals before being selected to the national team competing at the APhO.

Taking part in the APhO has open opportunities for Chinese students to interact on a global

platform. It also broadens their perspectives and fuels their drive for technological excellence.

(Source: Official WeChat account of the China Centre for International Science and Technology Exchange)

China announces top 10 scientific and technological advances in ecological environment in 2022



Press Conference to unveil the Top 10 scientific and technological breakthroughs in ecological conservation
Photo credit: *China Youth Daily*

On June 5, 2023, in recognition of World Environment Day, the CAST Alliance for Ecological and Environmental Sciences and Industry unveiled China's top ten ecological and environmental breakthroughs of 2022 in a press conference in Beijing. The announcement showcased the latest and most significant research in China's ecological environment sector, highlighting China's crucial contributions to environmental protection and sustainable development.

Shortlisted advancements recognized various areas such as protection of the Yangtze River ecosystem, management of noise pollution, control of soil pollution, retention of nitrogen and phosphorus in lakes

and internal circulation mechanisms, remote sensing of atmospheric aerosol optical components and their climate effects, technologies for reducing pollution and carbon emissions in the steel industry, a study on the eastward expansion of warm and humid climate in northwest China and its environmental consequences, and techniques for controlling red tide with modified clay.

At the press conference, Tu Ruihe, the United Nations Environment Programme (UNEP) representative in China, called on scientists and the business community to continue leading the way in scientific and technological innovation. He urged them to support China's commitment to reducing pollution, carbon emissions, and enhancing environmental quality as well as preserving ecosystem stability and biodiversity. He also emphasized the importance of inter-

national collaboration and communication. Tu Ruihe was confident that these efforts would benefit not only China but also its neighboring countries.

(Source: Official WeChat account of the China Centre for International Science and Technology Exchange)

Academic Exchange

2023 Global Artificial Intelligence Technology Conference held in Hangzhou



Keynote session of GAITC 2023
Photo credit: Official WeChat account of the China Centre for International Science and Technology Exchange

On June 10, 2023, the Global Artificial Intelligence Technology Conference (GAITC 2023) kicked off in Hangzhou, Zhejiang Province. The conference, themed “Communication, Integration, and Mutual Benefits,” was guided by CAST and hosted by the Chinese Association for Artificial Intelligence (CAAI). It drew around 300 participants from academia and industry including 40 distinguished Chinese and international academy members who shared insights.

The conference featured one keynote session, 33 thematic forums, and over 200 presentations. More than 70 exhibitors and contestants from various regions participated.

The conference commenced with the award ceremony for the 2023 Global AI Technology Innovation Contest, at which six teams were recognized for their excellence in the algorithm event. The winners of the CAAI- MindSpore Open Fund were also announced at the ceremony. The conference also marked the launch of the 2024 Global AI Technology Innovation Contest and the unveiling of CAAI’s recommended conferences and journals, reaffirming CAAI’s commitment to academic exchange, journal and talent development, and innovation and entrepreneurship in AI.

At the keynote session, eight esteemed Chinese

and international experts shared their insights on key AI technologies, AI application trends, and sustainable development. Their presentations provided an excellent platform for exchanging ideas.

Several thematic forums were also held covering a broad range of topics such as AI logic, large-scale AI models, ChatGPT, and AI ethics. Emphasis was on the intersection and integration of AI science and its pervasive development, and it offered participants in-depth and comprehensive knowledge for practical application.

(Source: Official WeChat account of the China Centre for International Science and Technology Exchange)

Belt and Road International Science Communication Seminar Recap

On May 15, 2023, the

Belt and Road International Science Communication Seminar was held on the premises of China Science and Technology Press. Manzoor Hussain Soomro, founding president of the ECO Science Foundation (ECOSF), attended.



Belt and Road International Science Communication Seminar
Photo credit: Official WeChat account of the China Science and Technology Press

During the seminar, representatives from China Science and Technology Press provided Professor Soomro a comprehensive overview of their operations. They discussed business scope, import and export of books, international partnerships, and key plans for international cooperation in 2023. They showcased considerable publications on agriculture and nutrition. Additionally, they updated him on the progress of the China Science Communication project by sharing its background, current status, available resources, team of experts, and distribution networks. As part of their presentation, they also shared clips of English-language science education videos produced through the project.

Professor Soomro, a highly accomplished expert in science communication and a Distinguished Overseas Expert of CAST, praised the press for its international

endeavors and the advancements made by the China Science Communication project. He also expressed enthusiasm to contribute to future science dissemination initiatives led by the project and the press.

(Source: Official WeChat account of China Science and Technology Press)

CMA council member Yang Huilin elected President of ISASS International



Photo credit: Official WeChat account of the China Centre for International Science and Technology Exchange

From June 1 to 3, 2023, the International Society for the Advancement of Spine Surgery (ISASS) held its 23rd Annual Conference in San Francisco, USA. During the conference, Yang Huilin, a council member of the Chinese Medical Association (CMA), made history by becoming the first-ever Chinese scientist to be elected as President of ISASS Interna-

tional.

Yang has served as Deputy Editor of the *International Journal of Spine Surgery* (IJSS), the official journal of ISASS, and has been an active member of the ISASS Council. His exceptional work has earned him recognition as one of the Top 2% of scientists worldwide and a highly cited Chinese researcher by Elsevier. He has received numerous accolades in the field.

In his new role as President of ISASS, Yang Huilin will work closely with council members to foster international dialogue and collaboration within the realm of spine surgery. Their collective efforts will drive ISASS forward and attract more spine surgeons from around the world to contribute, engage, and spearhead innovation. This will facilitate the development and clinical application of groundbreaking

technologies and ideas, ultimately benefiting patients globally.

Founded 20 years ago by six esteemed spine surgeons from the United States and Europe, ISASS is committed to pioneering significant advancements in spine surgery. It has played a significant role in the research, development, and application of new technologies, therapies, and devices used in spine surgery.

(Source: Official WeChat account of the China Centre for International Science and Technology Exchange)

CIESC Executive Director Chen Jianfeng attends WCEC Executive Committee summer meeting

On June 6, 2023, the Executive Committee of the World Chemical Engineering Council (WCEC) convened its summer meeting in

Buenos Aires, Argentina. The event attracted representatives from the four global chemical engineering alliances spanning Europe, Asia-Pacific region, Pan-American region, and South Africa as well as over 20 delegates from China, Malaysia, the UK, the US, Germany, France, Spain, Canada, Argentina, and South Africa.

Chen Jianfeng, Executive Director of the Chemical Industry and Engineering Society of China (CIESC), member of the Chinese Academy of Engineering (CAE), and professor at Beijing University of Chemical Technology, joined the meeting virtually. He contributed to the discussions by sharing suggestions that highlighted China's advancements in science, technology, and humanities. Moreover, he provided updates on the progress of preparations for the 12th World Congress of Chemical Engineering

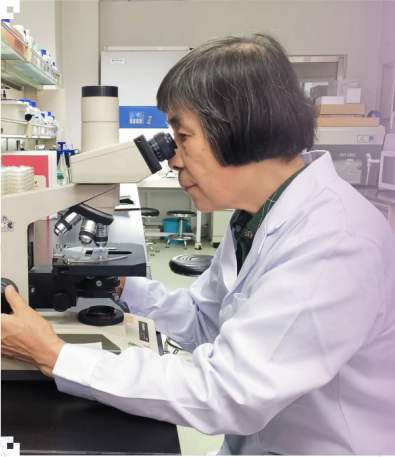
(WCCE12) and the 21st Congress of the Asia Pacific Confederation of Chemical Engineering (21st APCCChE), both scheduled to take place in Beijing in 2025.

The WCEC was established in 2001 through the collaborative efforts of the European Federation of Chemical Engineering (EFCE), the Asia Pacific Confederation of Chemical Engineers (APCCChE), and the Inter-American Confederation of Chemical Engineering (IACChE) as well as six chemical engineering societies from Germany, the US, the UK, China, Japan, and Australia. Among the founding organizations, CIESC is a member of the WCEC executive committee. Since 2016, Chen Jianfeng has represented CIESC on the committee.

(Source: Official website of CIESC)

Scientist Profile

Zhuang Wenyng: Exploring the Fascinating World of Fungi



Zhuang Wenyng is a mycologist and a research fellow at the Institute of Microbiology at the Chinese Academy of Sciences (CAS). She is also a member of the CAS, the International Eurasian Academy of Sciences (IEAS), and the World Academy of Sciences (TWAS). She holds influential positions in the Executive Committee of the International Mycological Association (IMA) and the Mycological Society of China (MSC). Furthermore, she is Deputy Editor of the *Journal of Chinese Spore Plants* and serves on the editorial boards of several globally respected journals such as *Fungal Diversity*, *Mycotaxon*, and *Phytotaxa*.

Photo credit: bjnews.com

Across a career spanning over three decades, Zhuang has remained devoted to the classification and molecular systematics of ascomycete fungi. She has published more than 180 papers, edited five major works, and contributed significantly to eight others. Notably, she has played a crucial role in the creation of the ninth edition of the internationally recognized reference book, *Dictionary of the Fungi*. Reflecting on

her research journey, Zhuang predicted that future generations would continue to uncover new fungal taxa and push the boundaries of our understanding.

Fungi, alongside animals and plants, form a distinctive biological group. Out of the estimated 2.2 to 3.8 million species of fungi worldwide, only approximately 6 percent have been discovered so far. For Zhuang, fungi represent an invaluable

treasure trove of knowledge. She sees them as a key to unlocking the secrets behind life's transition from prokaryotes to eukaryotes. "As relatively primitive eukaryotes, fungi could provide insights on the fundamental principles underlying the evolution of life," she explained. Through her tireless research efforts, Zhuang has successfully identified over 360 new species of fungi, driving advancements in Chinese fungal research.

Trekking China in search of new fungal species

Exploring the world of mycology often requires scientists to embark on challenging expeditions to uncover new species. Reflecting on her field trips during the 1970s and 1980s, Zhuang said, “We had to lug around our equipment and baggage, hopping between trains and long-haul buses and using different means of transportation to reach our destinations. In regions where electricity was scarce, we had to dry our samples over boiling water pots.”

Despite limited funding, in 1994, Zhuang and her team conducted a thorough study of fungal resources on the Daba Mountain Range in Sichuan, Shaanxi, and Hubei provinces. They published their discoveries in a series of seven articles in several internationally recognized journals. Eventually, the

findings were compiled into a book called *Fungi of the Daba Mountains*, marking the debut of Chinese mycologists in global research.

Over the years, Zhuang and her team have conducted extensive field trips across 26 provinces and regions in China and examined samples from 39 countries and regions. They have identified a new family, thirteen new genera, and over 360 new species. Zhuang has also resolved numerous classification and naming issues. Her monographs on three distinct genera of discobacteria has exerted a profound impact while her taxonomy has been widely accepted in the field. Thanks to her efforts, the species count within specific taxonomic groups in China has witnessed a significant increase.

Chinese mycology research achieving global recognition

Zhuang Wenying

actively participates in international exchange, lending her expertise to various endeavors such as the identification of universal DNA barcodes for fungi and exploration of phylogenetic relationships within the order Agaricales. Through systematic research on 20 key genera, she has shed light on the taxonomic status of specific groups within the class Agaricomycetes. This groundbreaking research has gained significant recognition both domestically and internationally. Her examination of Basidiomycota fungi has greatly contributed to human understanding of their species diversity. She has provided clear explanations of concepts and their development and enhanced the current classification system for specific families and genera.

Zhuang’s achievements have led scholars to name a new fungal genus (Wenyingi) and a new bacterial genus (Weny-

ingzhuangia) in her honor. Yet she maintains a humble perspective, emphasizing that there is still much to accomplish and numerous tasks that lie ahead. (Source: thepaper.cn)

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CAST is the largest non-governmental organization of scientific and technological professionals in the world. Through its 215 member societies and local branches all over the country, CAST maintains close ties with millions of Chinese scientists, engineers, and other professionals working in fields of science and technology.

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