中国科学技术协会
China Association for Science and Technology

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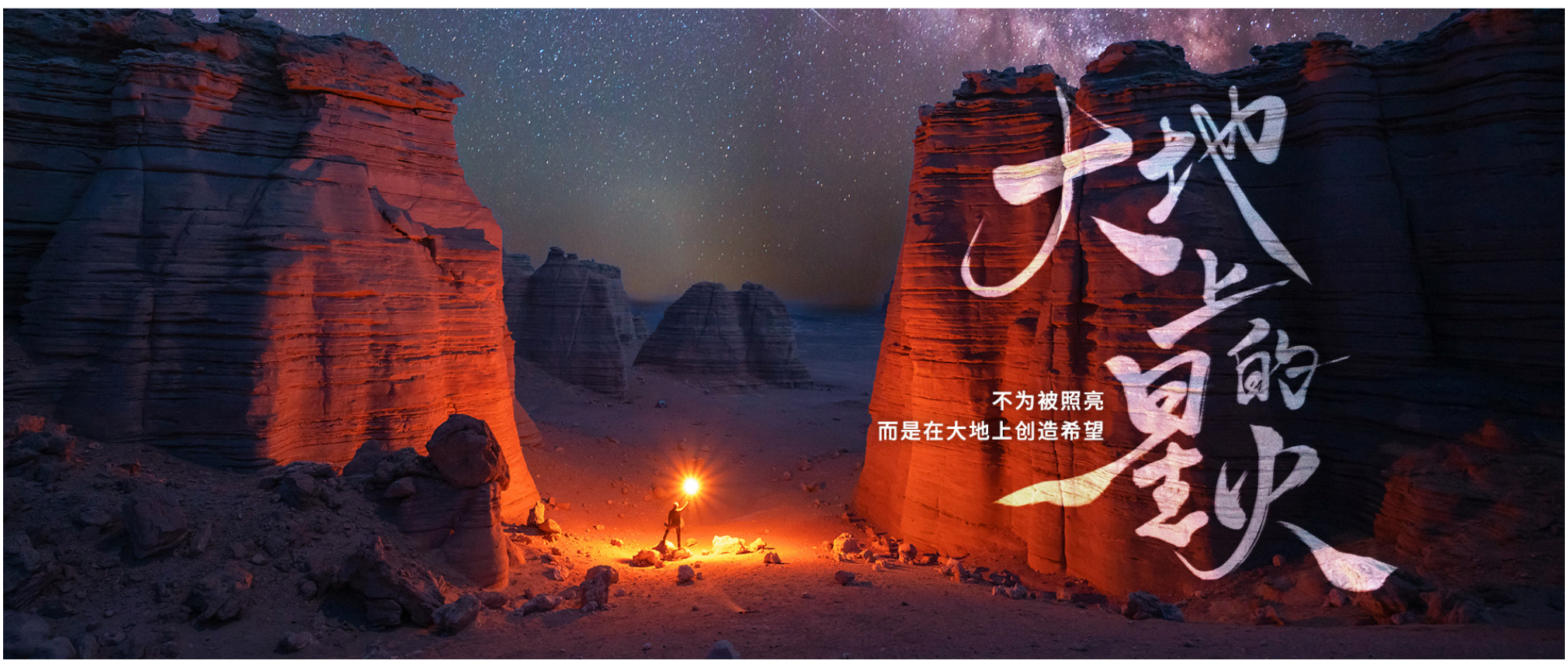
Newsletter

Headlines



Poster for the National Science and Technology Workers Day 2022

Special report on China's National Science and Technology Workers Day

What is China's National Science and Technology Workers Day?

In 2016, the China Association for Science and Technology (CAST) convened its ninth national congress on May 30 in Beijing. Chinese President Xi Jinping addressed the congress and called for developing China into a leading power in science and technology. To commemorate the occasion and respond to a call from many Chinese science and technology workers, the Chinese government designated May 30 as the National Science and Technology Workers Day. Chinese science and technology workers enjoyed a festival in their honor for the first time. Since then, various science and technology organizations led by CAST and China's Ministry of Science and Technology have observed the day with distinctive events and exchange activities.

The National Science and Technology Workers Day was established to draw attention to the role of innovation and the importance of talent and career development of science and technology workers. It encourages Chinese governments at all levels to improve communication and better serve their innovation and entrepreneurship needs. CAST celebrates this annual festival with a series of themed events for science and technology workers across China.

How is China's National Science and Technology Workers Day celebrated?

In 2017, on the first National Science and Technology Workers Day, CAST held a series of themed events in Beijing, including an awards ceremony to present China's first National Award for Excellence in Innovation, a series of intercollegiate art performances honoring China's most famous scientists, a special ceremony to celebrate publication of a book about famous Chinese scientists, the launch of a live-streamed program that tracks typical days of Chinese scientists, and the launch of https://www.scimall.org.cn/, a service platform for Chinese science and technology workers.

In 2018, as China celebrated the 40th anniversary of reform and opening up and CAST celebrated its 60th anniversary, the second National Science and Technology Workers Day was celebrated by hosting a seminar attended by prestigious scientists and ordinary sci-tech workers, launching a call to all Chinese sci-tech workers to endeavor to make China a leading power in science and technology, and organizing a thematic meeting that reviewed the achievements and contributions of Chinese science and technology workers.

In 2019, to mark the 70th anniversary of the founding of the People's Republic of China, CAST celebrated the third National Science and Technology Workers Day by launching a nationwide volunteer campaign to raise awareness and a special themed concert featuring the interplay of art and science, dedicated to all science and technology workers in China.

In 2020, as the fourth National Science and Technology Workers Day approached, President Xi Jinping wrote a reply letter to 25 Chinese scientists, including agricultural scientist Yuan Longping and respiratory disease expert Zhong Nanshan, both with the Chinese Academy of Engineering (CAE), and aerospace engineer Ye Peijian, an academician with the Chinese Academy of Sciences (CAS). Through them, President Xi also extended greetings to all Chinese science and technology workers. Celebrations in 2020 included the official launch of "Innovation China", an online platform aiming to aggregate funding from industry and academia, accelerate the transformation and application of science and technology achievements, and promote local economic development.

In 2021, China embarked on a new journey to build a modern socialist country comprehensively, and CAST convened its tenth national congress. Chinese President addressed the opening of the congress and sent festive greetings to all science and technology workers in China who were going to celebrate the fifth National Science and Technology Workers Day. Over 90 million people participated in various special activities to mark the day.

The National Science and Technology Workers Day 2022 has been themed "Innovation, Self-Reliance, and Self-improvement." Planned events include a list of exemplary sci-tech workers in 2022, an awards ceremony for the 17th China Young Female Scientist Award, and a salon series featuring science, culture, and art exchange.

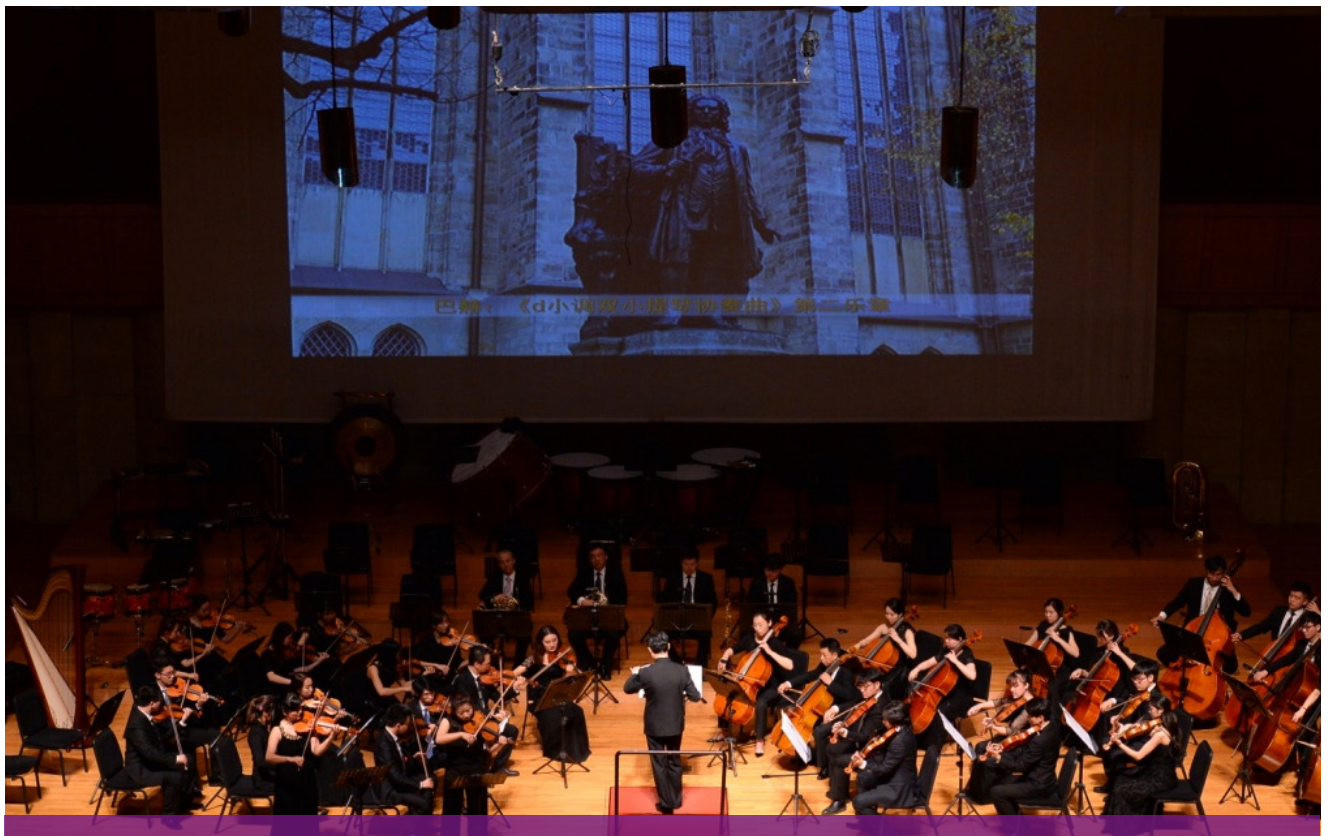
What is China's National Award for Excellence in Innovation?

On May 27, 2017, China's National Award for Excellence in Innovation was awarded for the first time in Beijing on the first National Science and Technology Workers Day. Research teams recognized by the award included those behind the Daya Bay Reactor Neutrino Experiment, the Long March-5 launch rocket for China's space mission, and the Tianhe high-performance computing (HPC) system. Individual recipients of the award included Professor Xue Qikun and Professor Shi Yigong of Tsinghua University and Professor Pan Jianwei of the University of Science and Technology of China (USTC).

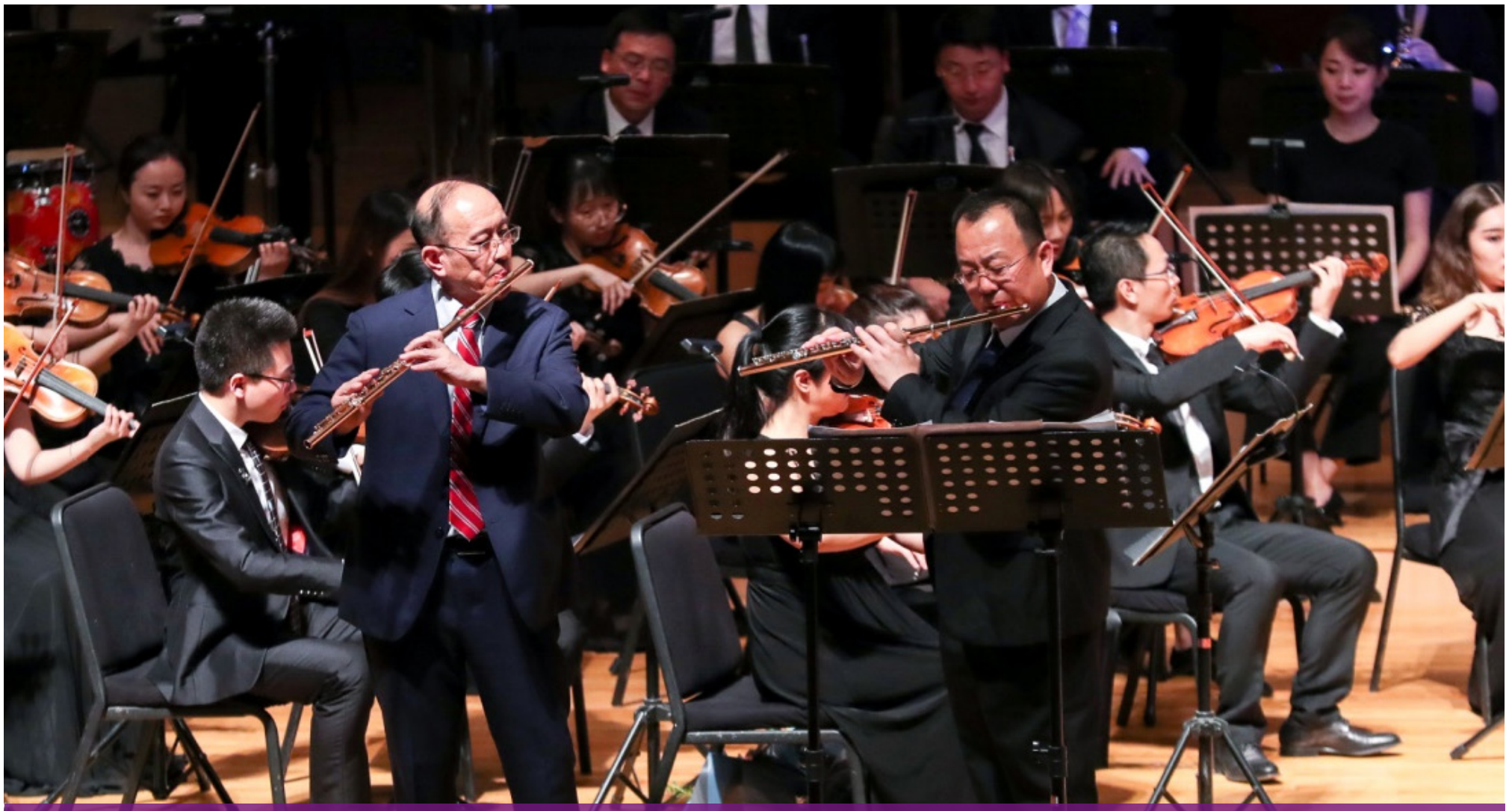
The National Award for Excellence in Innovation was set up to recognize individuals and research groups who achieve important breakthroughs in basic sciences research, technology research & development, machinery and engineering design, and those who generate enormous economic returns or make significant contributions to popular science and social services. It joins the distinguished State Natural Science Award, the State Technological Invention Award, and the State Science and Technology Progress Award as another prestigious award under only the highest State Preeminent Science and Technology Award.

The National Award for Excellence in Innovation is given every three years in three categories. Each time, 10 research groups are selected from nominations to receive a medal, 30 scientists are recognized as model workers at provincial and ministerial levels, and up to 300 Chinese science and technology workers are awarded a certificate for professional excellence.

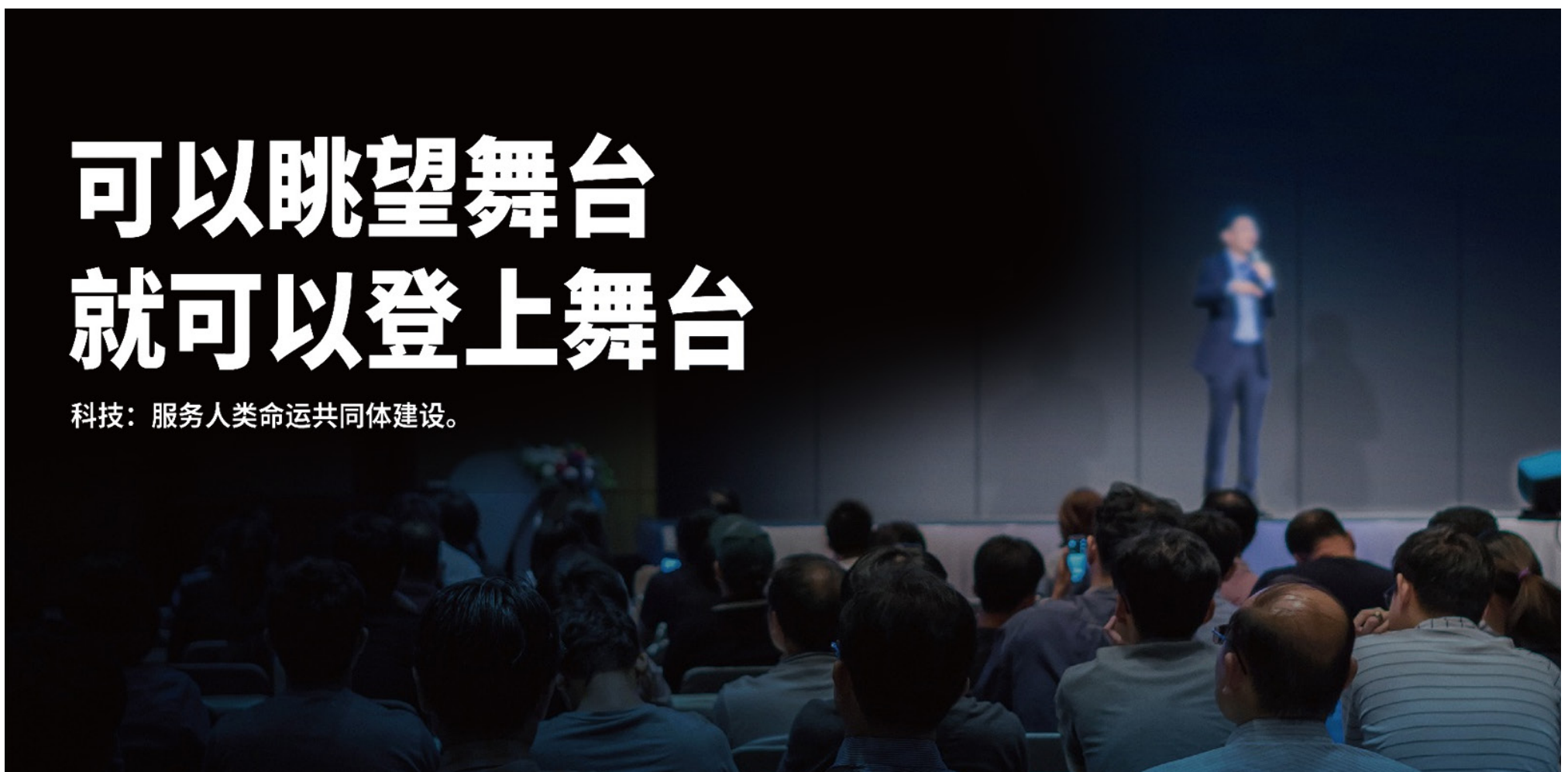
Photo stories



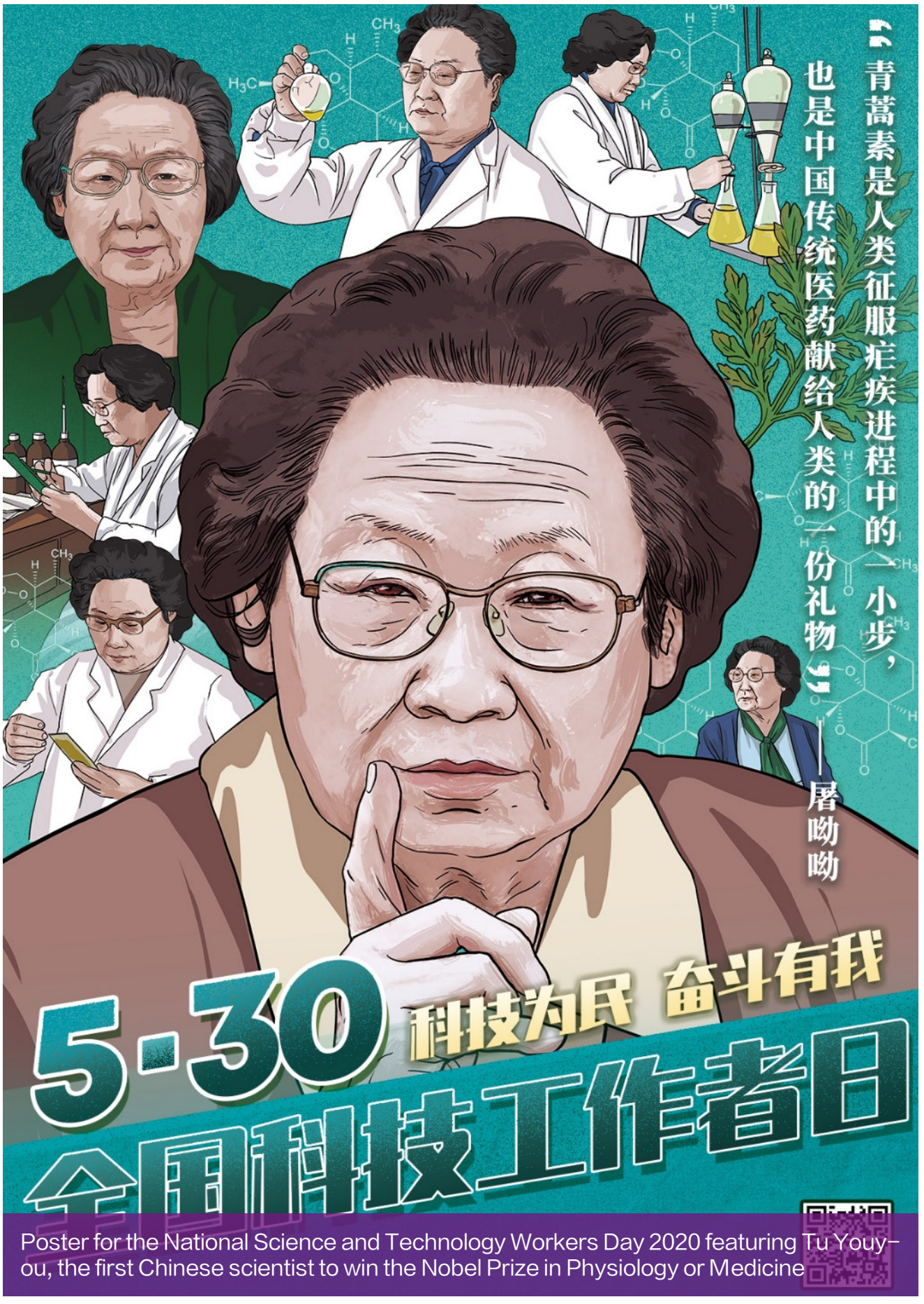
A special themed concert featuring intertwined art and science was held on the National Science and Technology Workers Day 2019 at the Beijing Forbidden City Concert Hall.



As part of celebrations of the National Science and Technology Workers Day 2019, Guan Xiaohong, an academician with the Chinese Academy of Sciences (CAS) and Dean of the Faculty of Electronics and Information Engineering of Xi’an Jiaotong University, joined Professor Yang Xi of the Xi’an Conservatory of Music to perform at the concert. The music they played brought focus to the science of instrumental sounds including the power-law relationship of melody intervals and how geometric transformation can be applied in composition. Highlighting a relationship that has been explored by Albert Einstein, Qian Xuesen, and British scientist Joseph Needham, the performance kept the audience enthralled with the connection between art and science.

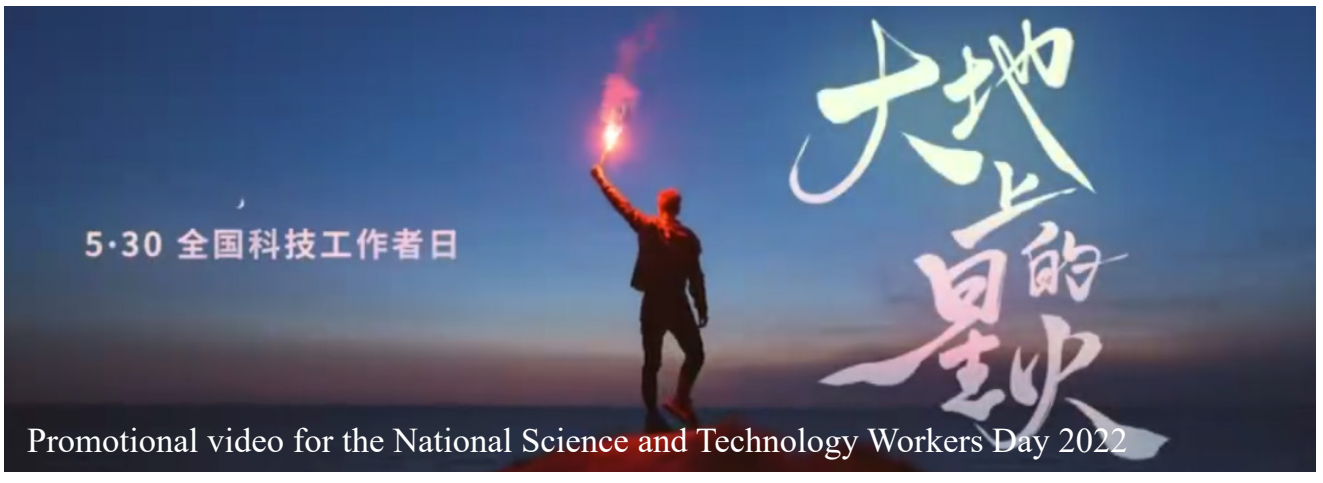


Poster for the National Science and Technology Workers Day 2021



Poster for the National Science and Technology Workers Day 2020 featuring Tu Youyou, the first Chinese scientist to win the Nobel Prize in Physiology or Medicine

National Science and Technology Workers Day 2022



Promotional video for the National Science and Technology Workers Day 2022

The theme of the National Science and Technology Workers Day 2022 is “Innovation, Self-Reliance, and Self-Improvement.” Planned events include the announcement of the first batch of education bases for cultivating scientists, the establishment of mentor groups who are going to deliver lectures on the makings of a scientist at universities, research institutions and enterprises, the opening of a hotline for psychological counseling for sci-tech workers, and the release of a list of exemplary sci-tech workers.

On May 10, 2022, the China Association for Science and Technology (CAST) and the Ministry of Science and Technology called on all science and technology workers in China and elsewhere to submit a video showing their routine work, demonstrating how their work helps spread science and technology, or explaining the latest science and technology developments. Selected entries will be displayed at the main venue for celebrations for this year’s National Science and Technology Workers Day.

On May 20, 2022, CAST released a promotional video and a poster for the National Science and Technology Workers Day 2022. The video, entitled “To every flash of light on the earth,” is a salute to the dedication and commitment of every science and technology worker.

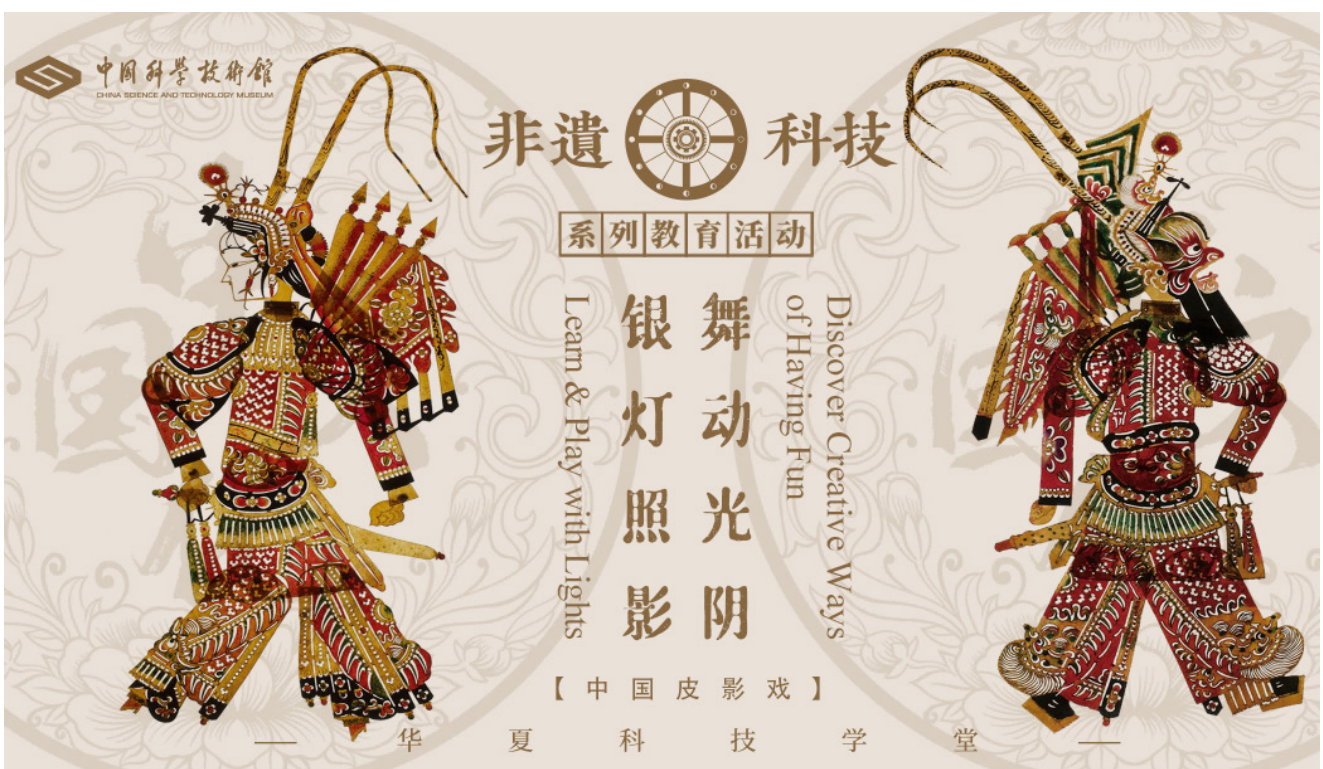
CAST

Seminar on “Innovation China” International Science and Technology R&D Community held

On May 10, 2022, a seminar on "Innovation China" International Science and Technology Innovation R&D Community was held. Leaders of International Science and Technology R&D Communities in Nanjing, Shenzhen, Qingdao, and Ningbo reviewed the progress they have made in their pilot communities. Leaders from the China Association of Science and Technology (CAST) briefed participants on progress in international recognition of engineering certification, overall development of the piloted International Science and Technology R&D Community, and services provided by the international R&D communities for those who choose to seek innovation and entrepreneurship in China. The International Science and Technology R&D Community is an important part of the pilot "Innovation China" platform. At the present stage, the R&D community mainly consists of those focusing on international institutional cooperation, those serving overseas engineers in research and development, and those targeting international young entrepreneurs.

China Science and Technology Museum launches sci-tech educational activities on intangible cultural heritage preservation

You might have heard that Chinese paper-cutting, Chinese shadow puppetry, and Peking opera are on the UNESCO's representative list of the intangible cultural heritage of humanity, but do you know the science and technology that works behind the preservation of these folk art forms? China Science and Technology Museum has launched a new series of sci-tech educational activities on China's intangible cultural heritage preservation targeting young kids. Explore light with shadow puppets, see how silk is separated from the cocoon, or get hands-on in a science experiment and analyze the results with peers. The program aims to provide an engaging environment for kids to learn how science and technology have given traditional Chinese art new strengths in life. To minimize the risk of COVID-19, the program officially opened to the public online in October 2021, with the first series of fun events going fully operational by the end of May 2022.



Local associations for science and technology

World Young Scientists Federation to be founded by Zhejiang Association for Science and Technology

On April 28, 2022, the Zhejiang Association for Science and Technology held a special promotional meeting for the World Young Scientists Federation and the World Young Scientists Summer Academy. The meeting decided to establish the World Young Scientists Federation and to open a World Young Scientists Summer Academy in Zhejiang.

Preparatory meeting for the 2022 World Young Scientists Summit (WYSS 2022) parallel session in Jiangxi

On April 29, 2022, a video conference was held in preparation for the 2022 World Young Scientists Summit (WYSS 2022) parallel session in Jiangxi Province. At the conference, the Office of the Executive Committee of the WYSS 2022 from the Zhejiang Association for Science and Technology reviewed the progress since previous summits and preparations in Zhejiang for the year's upcoming summit. The Jiangxi Association for Science and Technology also briefed Zhejiang partners on preliminary work made for the parallel session. Representatives from the two provincial associations, Nanchang University, and Nanchang High-tech Zone then engaged in discussions on forms of activities for the

parallel session, stakeholder needs, cooperation models, and other details.

National societies

Nonferrous Metals Society of China holds preparatory meeting for 2023 International Lead and Zinc Conference

On April 27, 2022, the Nonferrous Metals Society of China (Nfsoc) held a preparatory meeting for the 2023 International Lead and Zinc Conference in collaboration with the Central South University.
Participants included:

Gao Huanzhi, the vice president and secretary-general of the Nfsoc.

Sun Wei, the dean of the School of Resource Processing and Bioengineering of the Central South University.

Han Haisheng, the deputy director of the Department of Minerals Processing and Bioengineering of the Central South University.

Andreas Siegmund, a member of the organizing committee of the International Lead and Zinc Conference and Canadian representative of the Minerals, Metals & Materials Society (TMS).

Joseph Grogan, a member of the organizing committee of the International Lead and Zinc Conference and American representative of the TMS.

The meeting decided to schedule the next meeting of the organizing committee in about a month. At that time, the Chinese host is expected to announce the event's theme, time, and lineup of its organizing committee. The meeting also appointed Andreas Siegmund as the point of contact with other international organizing committees and tasked him with providing necessary assistance when required.

International Symposium on Geriatric Oncology held online

On May 6, 2022, an international symposium entitled "Cancer and Aging: From Global to Regional Perspectives" was held online. The event was jointly hosted by the China Anti-Cancer Association (CACA), the Union for International Cancer Control (UICC), and the International Society of Geriatric Oncology (SIOG).

The symposium focused on policy analysis of the clinical and supportive treatment of geriatric oncology. Professor Anshu Banerjee of the World Health Organization (WHO) kicked off the presentations with takeaways from the United Nations Decade of Healthy Ageing Report and discussed the challenges of responding to an aging society. Chris Hardesty, a professor of KPMG Health & Life Sciences Practice, examined policies capable of alleviating the socioeconomic burdens of cancer and aging. Shi Qiuling, a professor at Chongqing Medical University, discussed the methodological considerations of integrating patient-reported outcomes into supportive care for older adults with cancer. Nicolo Matteo Luca Battisti, the president-elect of SIOG, presented an evidence-based precision approach to treating older adults with cancer. Enrique Soto, a professor at the National Institute of Medical Science and Nutrition in Mexico, introduced practices of geriatric oncology care in developing countries. Li Xiaomei, the director of Chinese PLA General Hospital, examined the epidemiology, diagnosis, and treatment of geriatric oncology in China. Erin McLennan, a clinical nurse with ICON Group, Australia, discussed the role of nursing in addressing the needs of older cancer patients. Habibullah Talukder, a professor of the Bangladesh Community Oncology Center Trust, used a case study to show support from patient groups for treatment and prognosis of older cancer patients in Bangladesh. Liu Dongying, a professor at Tianjin Medical University Cancer Institute & Hospital, shared her discovery of medical treatment for elderly small cell lung cancer (SCLC).

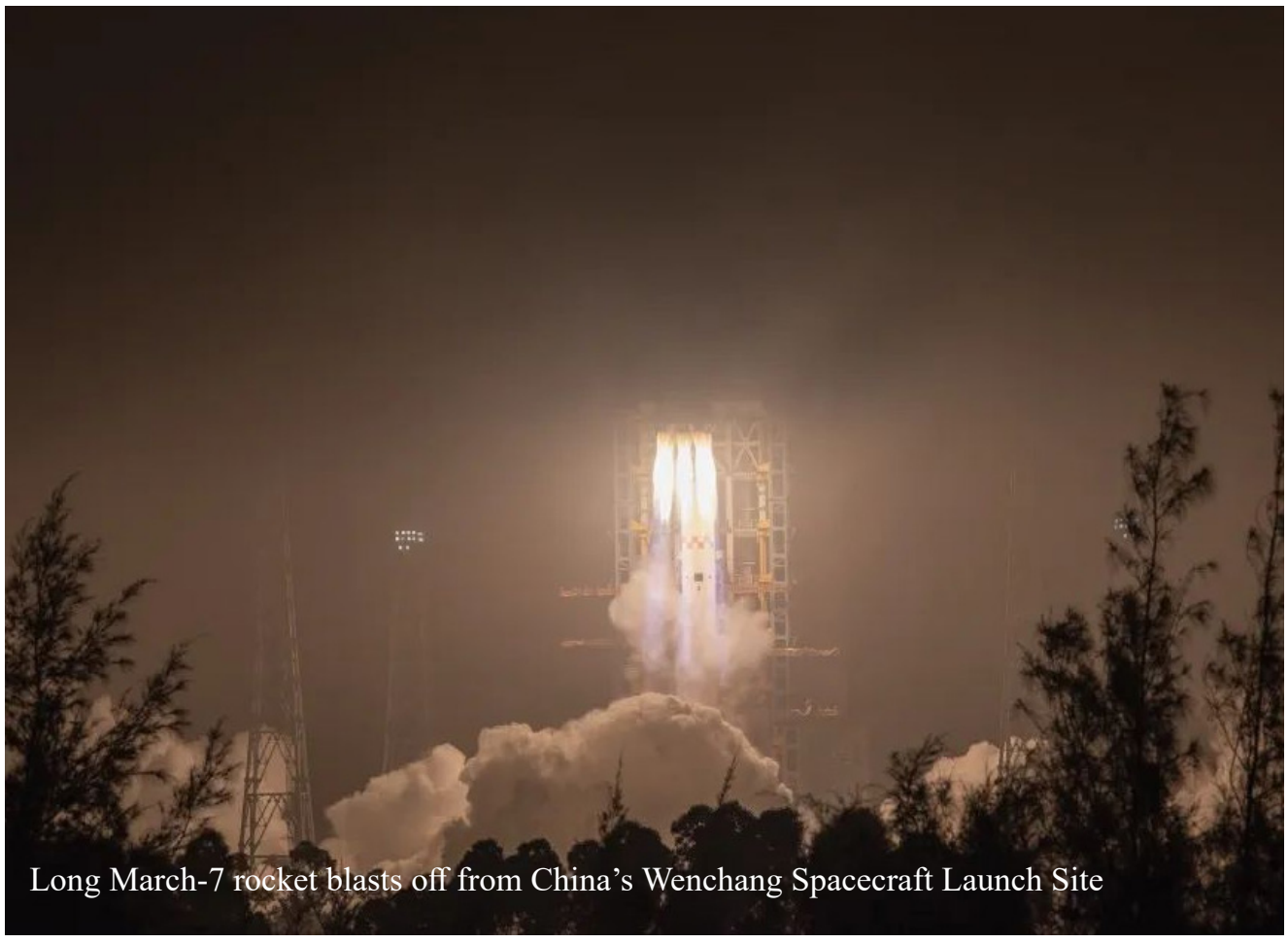
S&T News

China's Tianzhou-4 cargo spacecraft docks with China's space station

On May 10, 2022, the Tianzhou-4 cargo spacecraft was launched at past midnight Beijing time from the Wenchang Spacecraft Launch Site in Hainan, China, on a Long March-7 Y5 carrier rocket. Ten minutes after liftoff, Tianzhou-4 successfully separated from the rocket and entered the predetermined orbit. At 2:23 a.m., the spacecraft's solar sailboard began operating. Seven hours after the launch, Tianzhou-4 adopted the autonomous rapid rendezvous and docking mode to successfully dock with the rear port of Tianhe, the core module of China's space station. The two then orbit in space as a joined unit. The launch of Tianzhou-4 marked the first mission since China's space station evolved

from verification of key technologies to in-orbit construction.

The Tianzhou-4 cargo spacecraft is a fully sealed spacecraft on active duty with the world's largest cargo capacity and the most comprehensive in-orbit support. It delivered 200 pieces of scientific equipment including astronaut systems, space station systems, space application systems, and cargo spacecraft systems, 750 kilograms of additional propellant, and 6,000 kilograms of supplies to Tianhe to prepare the space station for the arrival of three crew members of China's Shenzhou-14 mission who are expected to stay in orbit for six months to assemble and construct the space station and carry out various experiments in materials science, microgravity, and aerospace medical procedures.



Long March-7 rocket blasts off from China's Wenchang Spacecraft Launch Site

Zhurong gathers evidence of water on Mars

A research team from the National Space Science Center of the Chinese Academy of Sciences (CAS) has detected signs of hydrous sulfates in soil collected by China's Mars rover Zhurong. Their findings were based on analysis of shortwave infrared spectroscopy and Navigation and Terrain Camera (NaTeCam) data obtained by Zhurong. Researchers surmised that the sulfate-rich hard crust found in the soil, which resembled sedimentary rocks, could have been formed by rising groundwater or melted ice that has since evaporated and crystallized into salt minerals. Their discovery marked Zhurong's first success in detecting hydrous minerals in situ on Mars using shortwave infrared spectroscopy. The study, which is key to understanding the evolution of the climate and environment of Mars, was published on May 11, 2022, in Science Advances.

Zhurong was sent by China's first Mars exploration mission Tianwen-1 and successfully landed in the southern area of the Utopia Planitia of Mars on May 15, 2021. It has explored the Mars terrain for over a year, traveling about two kilometers from its landing site to gather valuable scientific data on the red planet.

Chinese team develops robots capable of swarming in the wild

A research team from the College of Control Science and Engineering and Huzhou Institute of Zhejiang University has addressed the fundamental challenges of navigating aerial robots in complex environments by successfully flying a group of miniature intelligent aerial robots in a dense bamboo forest in Huzhou, Zhejiang Province. Their study, which used autonomous intelligent navigation and fast obstacle avoidance methods, appeared on the cover of Science Robotics on May 5, 2022.

The robotic drones were fitted with onboard cameras, sensors, and computers to allow researchers to use smart algorithms to help them avoid obstacles and fly in groups. Furthermore, the drones do not rely on any external infrastructure, not even GPS, to independently calculate and process information during flight. Various real-world field experiments demonstrated that they could independently determine the best flight path and travel freely in complex environments in the wild.

U.S. National Academy of Sciences elects six (ethnic) Chinese scholars

On May 3, 2022, the U.S. National Academy of Sciences (NAS) announced the election of 120 members and 30 international members. Chinese Ecologist Ouyang Zhiyun, professor and director of the Research Center for Eco-Environmental Sciences of the Chinese Academy of Sciences (CAS),

was elected as an international member.

Five American Chinese scholars were among the newly-elected members of NAS. They were:

Yi Cui, a professor of materials science at Sandford University.

Yishi Jin, an investigator of Howard Hughes Medical Institute and professor of biological sciences at the University of California, San Diego.

Chung-Pei Ma, the Judy Chandler Webb Professor in Physical Sciences with the Department of Astronomy of the University of California, Berkeley.

Jenny Ting, a professor in departments of microbiology and immunology and of genetics at the University of North Carolina, Chapel Hill.

Qijing Zhang, the Clarence Hartley Covault Distinguished Professor and associate dean for research and graduate studies at the College of Veterinary Medicine of the Iowa State University.

CAST is the largest non-governmental organization of scientific and technological professionals in the world. Through its 211 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.
www.cast.org.cn
newsletter@cast.org.cn