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China Commences Construction of Deep-Sea Research Laboratory

The South China Sea Institute of Oceanology (SCSIO) of Chinese Academy of Sciences began construction of a research laboratory on the ocean floor at Guangzhou, Guangdong Province, South China. The laboratory, weighing 600 tons, will operate at a depth of 2000 meters and can accommodate six crew while remaining under water for up to 30 days. It will be China's first major national scientific and technological infrastructure combining both marine and land elements.

Li Chaolun, Director of SCSIO, [underscored](#) that the objective of the research laboratory is to explore extreme marine environments and develop sustainable ocean resources. Li added that, "This isn't just about science" because it would translate to discoveries and industrial breakthroughs in marine biotechnology and methane hydrate extraction. The laboratory, which is expected to be completed by 2030, will leverage regional strengths in marine research and manufacturing, and will serve as an open-access platform for international collaboration, attracting top researchers.

It must be noted that during recent years the Chinese government has [introduced](#) several initiatives in enhancing the 'blue economy'. In the 14th Five Year Plan (2021-25), it introduced the development of a marine economy, highlighting policy supports including financial support and establishment of the China-ASEAN Blue Economy Partnership for mutual benefits. With a long coastline measuring approximately 18,000 km, China is [offered](#) an enormous opportunity for 'blue finance'

as an "emerging area in climate finance" in connection to safeguarding water resources, protecting marine life and investing in a substantial water economy. In 2019, national gross ocean product (GOP) hit close to CNY 9 trillion (\$1.26 trillion) accounting for 17% of the coastal GDP.

China Develops AI Tool for the Prediction of Liver Cancer Recurrence

A research team led by Prof. Sun Cheng from the University of Science and Technology of China (USTC) has [developed](#) the world's first liver cancer recurrence artificial intelligence (AI) prediction tool, called the "Tumor Immune Micro Environment Spatial" (TIMES). The new AI programme boasts 82.2 per cent accuracy in detection of recurring cancer cells. The USTC team conducted a systematic transcriptomic and spatial omics integrated analysis based on liver cancer sections from 61 patients. In the research, it was ascertained that the spatial distribution of immune cells is more decisive for clinical prognosis than their overall number, leading to a new approach in the tumor micro-environment assessment.

Liver cancer is the third leading cause of cancer-related deaths globally. Prof. Sun [underscored](#) that the team is actively collaborating with industry partners to standardize clinical applications, so to provide a revolutionary decision-making tool that can help doctors optimize personalized treatments, especially in resource-limited settings. Meanwhile, the researchers have released a free online version of TIMES, where users around the globe will be able to upload pathological staining images for instant risk evaluation.

Scientific Collaboration Projects

A Memorandum of Understanding (MoU) between the Aerospace Information Research Institute (AIR), Chinese Academy of Sciences and the United Nations Satellite Centre (UNOSAT) was [signed](#) on 26 March in Beijing. The purpose of the MoU is to strengthen joint efforts in leveraging aerospace technologies to bolster disaster resilience, advance sustainable development goals and foster international scientific cooperation. The partnership will prioritize several thematic areas, including disaster risk assessment and management, emergency response coordination, capacity building in remote sensing applications and data sharing standards.

In the backdrop of the signing of the MoU, Prof. Zhang Bing, Deputy Director of AIR and Mr. Evariste Karambizi, Acting Director of UNOSAT, expressed confidence that collaboration between the two agencies will effectively carry out measures to address global challenges while advancing mutual developmental goals.

Scientific Research Breakthroughs and Discoveries

Quantum Physicists at the University of Science and Technology of China (USTC) [unveiled](#) the *Zuchongzhi 3*, a 105 – qubit superconducting quantum processor, which broke the world record by operating 15 times faster than Google’s latest Willow QPU, which set the record in December 2024. The latest iteration of *Zuchongzhi-3* includes 105 transmon qubits. According to the research team, *Zuchongzhi-3* will significantly enhance key performance

metrics compared to its predecessor *Zuchongzhi-2*. Meanwhile, the USTC research team has initiated research in quantum error correction, where it plans to increase rates of error correction.

The Dalian Institute of Chemical Physics of the Chinese Academy of Science [announced](#) a major breakthrough in a drone powered by an ultra-low-temperature high-energy-density lithium battery, which successfully completed a flight test in Mohe city in Heilongjiang Province, northern China under extreme cold conditions of minus 36 degree Celsius. Chen Zhongwei, head of the research team, stated that the successful test marked a new breakthrough in the execution of drone missions in harsh conditions like polar or high-altitude regions.

Chinese scientists from the Institute of Modern Physics (IMP) of the Chinese Academy of Sciences, in collaboration with scientists from Germany and Russia, were able to make significant progress in uncovering the microscopic mechanism behind heavy-ion cancer therapy. With this breakthrough, it is expected that the optimization of cancer treatment strategies and promotion of the development of new radiotherapy technologies will follow. Xu Sheyue from IMP [underlined](#) that “under the same radiation dose, heavy ions exhibit two to three time’s greater cancer-cell-killing efficiency than traditional X-ray radiotherapy.”

China Science Diplomacy

The 2025 edition of the ‘Zhongguancun Forum’ (ZGC Forum), an annual conference, was [held](#) in Beijing from 27-31 March on the theme “New Quality

Productive Forces and Global Technology Cooperation.” The main spotlight of the conference was on China’s latest advancements and industrial trends, i.e. artificial intelligence, humanoid robots and 6G. More than 1000 delegates, including business leaders, investors and scientists from more than 100 countries, attended the conference. Speaking at the event, the Chinese Vice-Minister of Science and Technology Chen Jiachang [stated](#) that China will continue to uphold the “principle of openness and cooperation in science and technology” for humanity. He also laid out four key proposals: deepening open cooperation in S&T, promotion of open science, people-to-people exchange and establishment of inclusive innovation ecosystem.

Strengthening cooperation in S&T between China and African countries, a Memorandum of Cooperation (MoC) between the China Association for Science and Technology (CAST) and the Sci-bono Discovery Center, Johannesburg, South Africa was [signed](#) on 18 March in Johannesburg. With the signing of the MoC, both sides aim to develop in-depth exchanges between scientists and plan to establish a China-South Africa Science Space at the Sci-bono Discovery Center.

Also on 17 March, The African Engineering Capacity-Building Initiative was officially [launched](#) in Nairobi, jointly funded by the China Association for Science and Technology (CAST) and the World Federation of Engineering Organisations (WFEO). In his inaugural address, He Junke, Executive President and Chief Executive Secretary of the Secretariat of the CAST, emphasized the importance of

capacity building for China and Africa in order to steer through dual challenges posed by the Fourth Industrial Revolution and green transformation.