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CAST Newsletter

**2026 Green Low-Carbon Innovation
Conference Promotes Green Transition and
Global Ecological Development**





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Headlines

2026 Green Low-Carbon Innovation Conference promotes green transition and global ecological development

From August 15 to 16, the 2026 Green Low-Carbon Innovation Conference (GLCC) was held in Huzhou, Zhejiang Province. Co-hosted by the China Centre for International Science and Technology Exchange and the Zhejiang Association for Science and Technology, the event brought together nearly 300 scientists, educators, business leaders, investors, and other representatives from international science and technology organizations, leading universities and research institutes in China and abroad, national academic societies, and companies in the green and low-carbon sector. Under the theme “Advancing the Green Low-Carbon Transition and Build-

ing a Global Ecological Civilization,” the conference featured in-depth discussions on ecological civilization, new energy systems, the international development of academic journals, and the advancement of women in science and innovation.



Plenary session of the 2026 Green Low-Carbon Innovation Conference

In his remarks, CAST Vice President Feng Shenhong noted that amid global challenges such as climate change and increasing resource and environmental constraints, technological innovation is becoming a key driver of sustainable development. Drawing on its strengths in talent networks, organizational coordination, and international exchange, CAST will support green and low-carbon development in four areas: advancing cutting-edge technologies to drive green and low-carbon industries; integrating science and education to strengthen the talent base for ecological civilization; promoting science communication to build broader public support for green development; and deepening international cooperation to jointly advance global ecological civilization.

Launched in 2022, the Green Low-Carbon Innovation Conference has been held for five consecutive years and

has developed into an important international platform for academic exchange, bringing together global expertise to advance green development and ecological civilization.

(Source: Official website of CAST)

International Dialogue on Women in Science and Innovation fosters global cooperation on green low-carbon development



The International Dialogue on Women in Science and Innovation

On August 16, 2026, the International Dialogue on Women in Science and Innovation, themed “Beyond Boundaries, Women Shaping the Future,” was held at the World Geospatial Information Home (WGIH) in Deqing, Huzhou, Zhejiang Province. Co-hosted by the China Centre for International Science and Technology Exchange and the Zhejiang Association for Science and Technology, the dialogue was held as part of the 2026 Green Low-Carbon Innovation Conference. Around 30 guests attended, including participants from South Africa, Nigeria, Bolivia, and Ghana, as well as representatives from China.

During the keynote session, three speakers from China and abroad shared their experiences and perspectives

on careers in science and innovation. Tobi Mzobe, representing the CEO of the South African Council for Natural Scientific Professions (SACNASP), shared South Africa’s experience in helping women advance from participation to leadership in science through career-long development pathways and international mentoring programs. Tao Simin, Secretary-General of the Shaoxing Association for Science and Technology and Director of the Shaoxing Science and Technology Museum, delivered a presentation titled “See the Light, Become the Light.” She reflected on her own journey across disciplinary boundaries in science communication, inspired by the dedication of scientists, and shared her efforts to encourage more women to forge their own paths in science and technology. Tang Ruidie, Deputy Director of the Central Research Institute of Chilwee Group, drew on her transition from

academia to industry to discuss how women scientists and engineers in the advanced battery and energy sector can move from participation to leadership.

During the roundtable discussion, participants from China and abroad exchanged views on interdisciplinary research, industry collaboration, and international cooperation. A representative of WGIH highlighted how Deqing's dynamic innovation ecosystem is creating new, potentially life-changing opportunities for women in science and technology. Emily Oliphant of South Africa and other participants drew attention to the practical challenges posed by infrastructure gaps and limited educational resources in Africa. They called for stronger cross-border mentoring networks and greater international openness and collaboration to overcome geographical barriers and enable more young women to connect

with the global science and technology community.

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

South African delegation visits Yuhang to explore cooperation in green and smart technologies



SACNASP delegation visits the Future Sci-tech City Exhibition Center in the Hangzhou West Science and Technology Innovation Corridor

On August 17, 2026, a delegation from the South African Council for Natural Scientific Professions (SACNASP), which participated in the 2026 Green Low-Carbon Innovation Conference as a special guest organization, visited Yuhang District in Hangzhou to strengthen people-to-people exchange in science and technology and explore opportunities for cooperation in green, low-carbon, and smart technologies.

During the visit, the delegation watched demonstrations of industrial inspection robots designed for use in substations, rail transit systems, and other environments, including wheeled inspection robots and quadruped robots, or "robotic dogs." Technical staff demonstrated the robotic dogs' capabilities in auton-

omous navigation across complex terrain, real-time image transmission, and anomaly detection and alerts. Members of the delegation also had the opportunity to operate the robots and were impressed by their stability and responsiveness in unstructured environments. The two sides discussed potential applications of intelligent robotics in areas such as green energy infrastructure inspection and safety monitoring at mining sites.

At Zhejiang Lab, the delegation learned about the architecture and operation of intelligent computing platforms and data hub systems. Researchers demonstrated how large-scale intelligent computing can help address complex challenges in green and low-carbon development, including climate modeling and energy dispatch. The South African experts expressed particular interest in applications such as

clean energy modeling and carbon footprint tracking. The two sides also discussed relevant technological approaches and opportunities for exchange among young researchers.

The visit provided an opportunity for the Chinese and South African science and technology communities to deepen mutual understanding and explore areas for future cooperation.

(Source: Official WeChat account of the Yuhang Association for Science and Technology)

Academic Exchange

ICIVT 2026 advances integrated space-air-ground-vehicle networks

On August 22, the 2026 International Conference on Internet of Vehicles Technology (ICIVT 2026) was held in Beijing. Host-

ed by the China Institute of Communications (CIC) and organized by Beihang University and the CIC Internet of Vehicles Committee, the conference was held under the theme “Space-Air-Ground-Vehicle Network Integration for a New Global Intelligent Connected Ecosystem.” It focused on cutting-edge research, key technologies, and industry innovation in the Internet of Vehicles (IoV), covering topics such as intelligent connected vehicles, integrated space-air-ground-vehicle networks, vehicle-road-cloud integration, intelligent computing, and data services. More than 200 researchers, industry experts, and other representatives from universities, research institutes, professional organizations, and companies in China, Canada, the United Kingdom, France, and other countries and regions attended the conference.

Xuemin (Sherman)



Participants of ICIVT 2026

Photo credit: Official WeChat account of CIC

Shen, an international member of the Chinese Academy of Engineering and professor at the University of Waterloo in Canada, delivered a keynote address titled “High-Fidelity and Efficient Simulator for 6G Space-Terrestrial Vehicular Networks.” He provided a systematic overview of high-fidelity, efficient simulation for 6G space-terrestrial vehicle networks and discussed its role in the development and validation of integrated space-terrestrial IoV technologies. Khaled Ben Letaief, an international member of the U.S. National Academy of Engineering and profes-

sor at The Hong Kong University of Science and Technology, spoke on “The Future of Wireless, Powered by AI,” exploring the opportunities that artificial intelligence, particularly foundation models, could bring to future wireless network architectures, intelligent decision-making, and autonomous optimization.

The conference also featured technical sessions, poster presentations, and three thematic forums: “Network Architectures and Key Technologies for Integrated Space-Air-Ground-Vehicle Networks,” “Multi-Domain Collaborative Perception and Decision-Making for Intelligent Connected Vehicles,” and “Key Technologies for Intelligent Computing and Data Services in the Internet of Vehicles.” Participants discussed emerging topics including intelligent communications for the low-altitude economy, integrated satellite-terrestrial networks,

semantic communications, integrated sensing, communication and computing, end-to-end autonomous driving, embodied multi-agent networks, large models, and native intelligence for 6G.

(Source: Official website of CAST)

International Awards

CIC fellow Zhang Wei named IEEE ComSoc President-Elect



Photo of Zhang Wei

Zhang Wei, a fellow of the China Institute of Communications (CIC), has been elected President-Elect of the IEEE Communications Society (ComSoc), becoming the first Chinese national to hold the position since the Society was established in 1972.

IEEE ComSoc is one of the world's largest and most influential professional organizations in the communications field, with activities spanning research, scholarly publishing, conferences, industry collaboration, and standards development. Under the Society's leadership succession arrangements, Zhang will assume the presidency of IEEE ComSoc in January 2027.

Zhang has a long record of service to both CIC and IEEE ComSoc. Within IEEE ComSoc, he has served two consecutive terms as Vice President, as Chair of the Wireless Communications Technical Committee, and

as Vice Director of the Asia Pacific Board. He has also served as Editor-in-Chief of *IEEE Wireless Communications Letters* and the *Journal of Communications and Information Networks* (JCIN). At CIC, Zhang currently serves as Vice Chair of the Cloud Native Networks Technical Committee and as a member of the Academic Affairs Committee. He has also served on multiple occasions as Program Committee Chair and Co-Chair for the IEEE/CIC International Conference on Communications in China (ICCC).

(Source: CIC Secretariat)

Ocean University of China professor Zhang Zhiwei receives Nicholas P. Fofonoff Award

The American Meteorological Society (AMS) recently announced the recipients of its 2027 awards and honors. Zhang Zhiwei, professor

at the Ocean University of China, received the Nicholas P. Fofonoff Award for his outstanding contributions to submesoscale-to-mesoscale ocean dynamics.



Announcement of the 2027 AMS awards and honors on the official AMS website

Named after renowned physical oceanographer Nicholas P. Fofonoff (1929-2003), the award was established in 2007 and is presented annually to an early-career researcher in recognition of outstanding research in physical oceanography. It recognizes work encompassing observations, theory, modeling, and related areas. To date, 22 scientists from the United States, the United Kingdom, France, Australia, and China have received the award.

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

Scientist Perspectives

Experts share perspectives on energy decarbonization and antimicrobial resistance at 2026 Green Low-Carbon Innovation Conference

From August 15 to 16, the 2026 Green Low-Carbon Innovation Conference was held in Huzhou,

Zhejiang Province. Co-hosted by the China Centre for International Science and Technology Exchange, the Zhejiang Association for Science and Technology, and other organizations, the conference featured keynote addresses by Sampson Mamphweli, head of the Energy Secretariat at the South African National Energy Development Institute (SANEDI) under South Africa's Department of Science, Technology and Innovation, and Timothy Robert Walsh, a member of Academia Europaea and professor of medical microbiology at the University of Oxford. Focusing on energy decarbonization and economic recovery, Mamphweli shared insights into South Africa's policy framework for aligning the energy transition with reindustrialization and a just transition. Walsh addressed antimicrobial resistance, discussing approaches to tackling this systemic health

challenge through the One Health framework.

Decarbonizing energy to drive South Africa's economic recovery and reindustrialization



Sampson Mamphweli, head of the Energy Secretariat at the South African National Energy Development Institute (SANEDI) under South Africa's Department of Science, Technology and Innovation, outlined the country's broader framework for linking the energy transition with economic recovery, reindustrialization, and a just transition. He explained how policies on national electrification, renewable energy, the just energy transition, integrated resource planning, grid development, green transport, hydrogen, and critical minerals work together to support these goals. Drawing on projects involving biofuels, microgrids, and renewable energy demonstration, he also showed how South Africa is building an end-to-end pathway from policy direction and technology R&D to demonstration, validation, and commercial deployment.

South Africa's experience highlights the importance

of a clear and coherent policy framework in turning long-term goals into action. From the White Paper on Science, Technology and Innovation to sector-specific strategies for energy, transport, and hydrogen, effective implementation depends on alignment across policy areas. National planning identifies demand, industrial policy sets priorities for domestic manufacturing, research programs build technological capabilities, and demonstration projects test business models. Together, these elements allow targets, funding, projects, and regulation to reinforce one another rather than operate in isolation.

A just transition must also balance energy security and affordability with inclusive development. In coal-dependent regions, the transition cannot simply mean shutting down existing capacity. Vocational training, local procurement, and distributed

energy projects can help communities participate in and benefit from the transition. At the same time, grid upgrades and a more diversified energy mix are essential to ensure that the shift to cleaner energy does not place an additional financial burden on households.

The value of innovation, Mamphweli emphasized, lies not in developing a prototype, but in solving real-world problems and bringing solutions to scale. Through targeted programs, SANEDI connects universities, research institutions, and businesses, enabling technology projects to address practical needs such as rural electrification and emissions reduction in agriculture while assessing their costs and commercial viability. Successful demonstrations must then be supported by intellectual property commercialization, standards and certification, and appropriate financing mechanisms

before solutions can be replicated and deployed at scale.

Green reindustrialization also requires investment in transmission networks, critical mineral processing, and the manufacturing of key components so that South Africa's resource advantages can be translated into domestic technological capabilities. Cooperation between China and South Africa illustrates how international partnerships can extend beyond equipment procurement to joint R&D, mutual recognition of standards, and talent development, while opening up opportunities in Africa's growing green energy market. Ultimately, the energy transition is not only about reducing carbon emissions, but also about creating new industries and jobs and delivering more affordable energy. By bringing together innovation, infrastructure, and inclusive development, decarbonization can become a powerful driver of reindustrialization.

Addressing antimicrobial resistance in the 21st Century



Timothy Walsh, a member of Academia Europaea and professor of medical microbiology at the

University of Oxford, described antimicrobial resistance (AMR) as a global systemic risk spanning human and animal health and the environment. Like climate change, AMR transcends national borders and sectors, with far-reaching health and economic consequences. Collaborative research involving China and Africa has shown how antimicrobial use, the spread of resistance genes, wastewater contamination, climate change, and human migration can interact to create challenges for low- and middle-income countries, where laboratory capacity is often limited, diagnostic costs remain high, and physicians frequently rely on empirical treatment. Addressing these challenges, Walsh argued, requires an integrated approach encompassing environmental management, infection prevention, affordable diagnostics, surveillance,

antimicrobial stewardship, and international cooperation.

Walsh stressed that AMR is by no means confined to hospitals. Effective antimicrobials underpin routine infection treatment, surgery and intensive care. As these drugs become less effective, the consequences could include rising mortality, higher health-care costs, and losses in workforce productivity. Antimicrobials are also widely used in livestock production, while resistant bacteria can spread through food, water, and insects, making clinical interventions alone insufficient. A One Health approach is therefore essential, with coordinated action across healthcare, agriculture, environmental management, and urban governance. Climate change and extreme weather could further amplify these risks by altering microbial communities and the conditions under which resistance

genes spread, while also damaging water and sanitation infrastructure. Walsh argued that climate policy and AMR control should therefore be considered together, supported by long-term, cross-regional research to better understand causal relationships and translate scientific evidence into coordinated policy action.

In regions with limited laboratory capacity, the high cost of diagnostics often leaves physicians reliant on empirical treatment, potentially reinforcing the cycle of antimicrobial resistance. Affordable, quality-assured local diagnostic systems are therefore needed so that surveillance data can better inform both clinical practice and public health decision-making. Global action must also be grounded in equity, with greater attention to conflict-affected areas and vulnerable populations, improved access to diagnostics and medicines,

and stronger infection prevention and sanitation infrastructure. Drawing on long-term collaboration among researchers in China, Africa, and Europe, Walsh emphasized that data sharing, joint training, and sustained investment in local capacity can build more durable defenses against AMR than one-off projects. He also highlighted what he described as a striking imbalance in global priorities: spending on weapons and warfare is approximately 1,000 times greater than investment in tackling AMR, while AMR causes at least 100 times more deaths each year than armed conflict. Correcting this imbalance, he argued, will require stronger political commitment and a more equitable allocation of resources.

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

Upcoming Conferences

CICED 2026 to convene in Guangzhou



The 12th China International Conference on Electricity Distribution (CICED 2026), jointly hosted by the Chinese Society for Electrical Engineering (CSEE) and China Southern Power Grid, will be held in Guangzhou from September 15 to 18, 2026. Under the theme “Secure, Reliable, Proactive and Autonomous New Distribution Systems,” the conference will bring together leading scholars and experts in the field to exchange insights and share research findings on the planning, design, construction, operation, and management of distribution systems, as well as related equipment and technologies.

CICED was jointly launched by CSEE and the State Power Corporation of China in 2000 and has since been held biennially, with 11 editions held to date. As one of the regional conferences affiliated with the International Conference on Electricity Distribution (CIRED), CICED provides a platform for international exchange and cooperation in electricity distribution.

The CICED 2026 program will feature keynote addresses, roundtable discussions, thematic workshops, paper presentations, technical visits, exhibitions, and other activities. The working language of

the conference will be English, with simultaneous interpretation available during plenary sessions.

For more information, please visit the Ciced 2026 website: <https://ciced2026.csee.org.cn/?sessionId=>

(Source: Official WeChat account of CSEE)

 For more information about the *CAST Newsletter*, please visit <https://kepu-journal.zkrh.org.cn/index>.

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