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半年报

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中心举办剑桥南京论坛2023 - 零碳和可持续发展:科学、政策、实践

CUNJC Held the "Cambridge Nanjing Forum 2023 - Zero Carbon and Sustainable Development: Science, Policy, and Practice "

中心举办"2023剑桥校友创新创业沙龙"

CUNJC Held the "2023 Cambridge Alumni Innovation and Entrepreneurship Salon"

中心项目在国际高水平期刊发表多篇科研成果

CUNJC Published Several Papers in International Top Journals



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In the second half of 2023, CUNJC continued its mission in applied research and commercialisation. It engages with the complete value chain from scientific research, innovation to commercialisation.

CUNJC's research concentrates on new energy, biomedicine and information technology, to meet the needs of local industry. To foster connection of advanced technology with local investment institutions, enterprises and others, the Centre runs regular roadshows showcasing recent developments. To support collaboration between the University of Cambridge and China, CUNJC hosts a series of salons on innovation and entrepreneurship bringing together Cambridge alumni from across China. With the Cambridge Admissions Office, CUNJC connected students in China with the University of Cambridge through a session on applying to Cambridge postgraduate study. CUNJC successfully held the Cambridge Nanjing Forum 2023 on "Carbon Zero and Sustainability: Science, Policy, Practice" combining scientific research, policy guidance and industrial transformation.





The Cambridge Nanjing Forum 2023 – Carbon Zero and Sustainability: Science, Policy, Practice was held on November 24th. The event was jointly hosted by CUNJC, the Jiangsu Provincial People's Government's Foreign Affairs Office, and Tsinghua University's Institute for Carbon Neutrality, and co-organised by the Nanjing Overseas Collaborative Innovation Centre (Cambridge, UK). More than 100 guests participated on-site and over 2,000 viewers watched the event online.

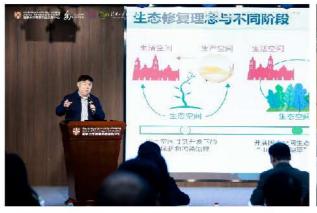














The event brought together speakers from academia, government and industry. Some special guests addressed the event:

- · Jing Yang, Deputy Director-General of Jiangsu Provincial People's Government's Foreign Affairs Office,
- · Isabel Ayton, First Secretary Science and Innovation at the British Embassy,
- · Bojie Fu, CAS academician and Director of the Academic Committee of the Chinese Academy of Sciences' Research Centre for Eco-Environmental Sciences,
- · Kebin He, CAE Academician and Dean of Tsinghua University's Institute for Carbon Neutrality,
- · Yang Yongfeng, Deputy Director of the Academic Affairs Bureau of the Chinese Academy of Sciences,
- · Sophie Durrans, UKRI Deputy Director (China).

Besides, there were many keynote speakers from world-leading academic institutions, such as the University of Cambridge, Chinese Academy of Sciences, Tsinghua University, Zhejiang University, Nanjing University, Southeast University. And representatives from the Chinese and British governments, and leading enterprises in key low carbon industries also contributed. Discussions emphasised the importance of cooperation between government, industry, academia, research, and finance to achieve net zero.



The 2023 Cambridge Alumni Salon on Innovation and Entrepreneurship was held on July 12th, with the theme of "Application-oriented Entrepreneurship, Financing, and Enterprise Innovation". It was organised jointly by CUNJC and the Nanjing Overseas Collaborative Innovation Centre (Cambridge, UK).

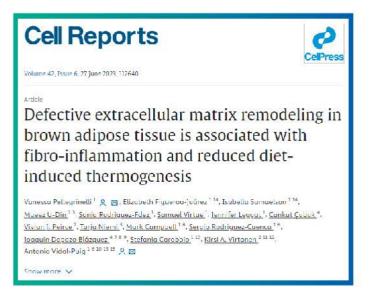
More than 60 investors and Cambridge alumni, representing leading investment institutions and technology developers, met to explore application—oriented innovation and commercialisation of scientific research within the new development paradigm.

Notable attendees included Wang Yuanhua, Deputy Director-General of Nanjing Municipal Science and Technology Bureau; Daping Chu, Professor at the University of Cambridge and Academic Director and CEO of CUNJC; and Josh Bowerman, Director of Development - Schools Programme at Development and Alumni Relations Office, University of Cambridge (CUDAR).

Distinguished guests such as Alan Song, Managing Partner of SoftBank China Venture Capital, and Hermann Hauser, Founder of ARM, a renowned chip design company, were invited to share their insights. Officials from the Science and Technology Innovation and Big Data Management Bureau of Nanjing Jiangbei New Area and the Nanjing Jiangbei New Area Industrial Technology Research and Innovation Park also participated.

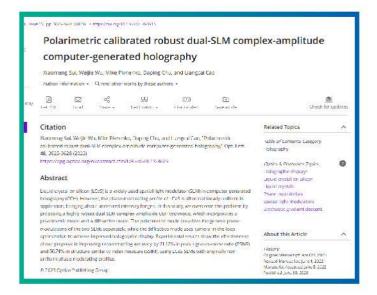


On 27 June, Prof. Antonio Vidal-Puig, PI of CUNJC's project "Study on Mechanism and Control Strategy of Obesity Complications" and co-PI Dr Sergio Rodriguez-Cuenca, published a research paper in Cell Reports entitled "Defective extracellular matrix remodeling in brown adipose tissue is associated with fibro-inflammation and reduced diet-induced thermogenesis."



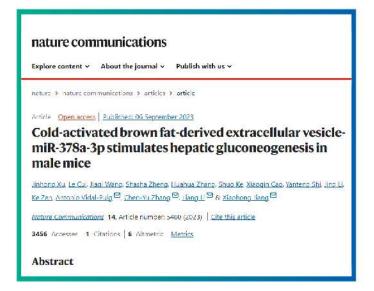
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On 30 June, Prof. Daping Chu, PI of CUNJC's project "Holographic Interferometer for 3D Surface" published a research paper in Optics Letters entitled "Polarimetric calibrated robust dual-SLM complex-amplitude computer-generated holography".



09.06

On 6 September, Prof. Antonio Vidal-Puig, PI of CUNJC's project "Study on Mechanism and Control Strategy of Obesity Complications" and leader of the TVPLab in Institute of Metabolic Science of University of Cambridge, along with the research team led by Chenyu Zhang, Xiaohong Jiang and Jing Li from Nanjing University published a research paper in Nature Communications entitled "Cold-activated brown fat-derived extracellular vesicle-miR-378a-3p stimulates hepatic gluconeogenesis in male mice". This found that in male mice, BAT-derived extracellular vesicles (BDEVs) activated during cold stimulation reprogrammed whole-body glucose metabolism by secreting RNAkine, which promotes hepatic gluconeogenesis.



09.09

On 9 September, Prof. Teng Long, PI of CUNJC's project "High Power Density DC Converters of 48V Power Supply Systems used for Datacentres" published a research paper in IEEE Transactions on Power Electronics entitled "Motor Overvoltage Mitigation by Active Cancellation of Reflections Using Parallel SiC Devices with a Coupled Inductor".



RESEARCH AND COMMERCIALISATION 科研与产业化

In mid-July, CUNJC held its sixth Roadshow on International Technology - New Energy and New Generation of Information Technology Session. It was co-hosted by CUNJC and Nanjing Overseas Collaborative Innovation Centre (Cambridge, UK).

The projects covered a wide range funding stages, from seed to series A. Five representatives of Oxbridge alumni-led companies (SDL Energy, Shiji Yunan, Functor-Z, Loongrise Avionics and OSEN Optics) displayed their strengths. The presenters met representatives of over ten investors and industrial parks, including HUAGAI Capital, Skycus Capital, Infinity Capital and Chaoxi Capital. The participants discussed funding opportunities in a lively atmosphere.



剑桥大学南京科技创新中心 国际技术系列路演

Roadshows of the CUNJC on International Technology

新能源和新一代信息技术专场









In mid–July, CUNJC held a session on biomedicine, as the seventh Roadshow on International Technology. It was co-hosted by CUNJC and Nanjing Overseas Collaborative Innovation Centre (Cambridge, UK). Directed by application innovation and aiming at industrial needs.

Five outstanding business proposals were introduced from Oxbridge alumni-founded companies: LeilingBio, Oxtium, BeiZhongYiHe, Tenoke, and CantaBio. The presenters met representatives of over ten investors including Linear Capital, Sinopharm Capital, NY Capital and Sky9 Capital, together with guests from industrial parks. The Centre supported dialogue between investors and entrepreneurs to meet their financial needs.





In late November, the eighth Roadshow of the CUNJC on International Technology was held showcasing information technology and new energy businesses. The roadshow was again co-hosted by CUNJC and Nanjing Overseas Collaborative Innovation Centre (Cambridge, UK).

The event showcased four outstanding businesses from the University of Cambridge, Tsinghua University, Beijing University of Posts and Telecommunications (BUPT). They are:

- "Glitterintech", developing a chip-sized spectrometer for wearable devices.
- "Zhuanzhuzhilian" promoting the digital transformation of manufacturing industry, driving down costs while improving quality and efficiency.
- "Zhierxing" and "Bitcom Technologies", both contributing to energy reduction and emission reduction in transportation.

The guests from local industrial parks attended the event, together with more than ten investment institutions including Addor Capital, Sky9 Capital, Sinovation Ventures, Winsoul Capital and Infinity Equity.



剑桥大学南京科技创新中心 国际技术系列路演

Roadshows of the CUNJC on International Technology

信息技术和新能源专场

The 9th Roadshow of the CUNJC on International Technology concentrated on Biomedicine and Medical Services and was held in mid-December. It was co-hosted by CUNJC and Nanjing Overseas Collaborative Innovation Centre (Cambridge, UK).

Four innovation teams from the University of Cambridge, the University of Oxford and University College London pitched to investors from Infiniti Capital, Winsoul Capital, Share Capital and Lion X Venture. Guests from Nanjing Biotech and Pharmaceutical Valley, Nanjing Jiangbei New Area Sci—Tech Investment Group and other local industrial parks and investment institutions also participated, giving vital feedback on the projects.

Focusing on medical care, three business aim to extend and improve the quality of life for cancer patients. "BioMavericks", "Suzhou PlasmaMed" and "VasoDynamics", respectively address early screening, pain relief, and prevention of treatment side effects at different stages of cancer treatment. The fourth, "SunsCell" focuses on large-scale automated cell culture using microsphere technology.



剑桥大学南京科技创新中心 国际技术系列路演

Roadshows of the CUNJC on International Technology

生物医药和医疗服务专场



CUNJC signed collaboration agreements with both Nanjing University and Soochow University, supporting research on the project "Study on Mechanism and Control Strategy of Obesity Complications". Discussions continue on the commercialisation of the project outputs, a key part of all CUNJC research.

CUNJC and Nanjing Tech University(NJTech) signed an agreement to collaborate on research and training cooperation on the project "DropBioApp Engineering Droplet-based Microfluidic Platform for Biological Applications".



In the second half CUNJC hosted a series of meetings with Jiangsu Industrial Technology Research Institute (JITRI), aimed at deepening cooperation in the fields of materials, energy and environmental protection, information technology, equipment manufacturing, and biomedicine.

This long-standing collaboration aims to support cooperation, identify future research projects and other activities to empower the Yangtze River Delta region.





On 11 and 12 September, CUNJC participated in the 2nd Jiangsu Conference for Industry-University-Research Cooperation and Exchange.

Centre staff met with many leading Chinese universities, technology transfer agencies and enterprises to discuss Industry–university research exchanges and emerging technology demands.





■ In August 2023, the team of the project "Holographic Interferometer for 3D Surface " won the "Excellent Team" award at 11th "Entrepreneurship in Jiangsu" – Science and Technology Entrepreneurship Competition, for its work on an integrated spectral imaging chip.



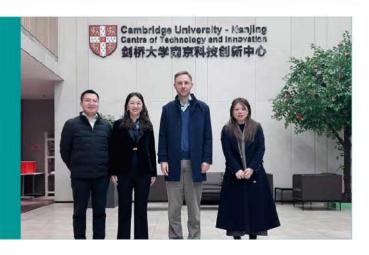
On 15 October, Prof. Antonio Vidal-Puig delivered a speech at the international Symposium on "Molecular Mechanisms of Obesity and Integrative Physiology", based on his project "Study on Mechanism and Control Strategy of Obesity Complications". The symposium was jointly held by Xi'an Jiaotong-Liverpool University, Fudan University's Institute of Metabolism and Integrative Biology, and Cell Press, a leading academic publisher.





On 16th October, Hanbing Zhang joined Prof. Vidal-Puig's team as an intern researcher. A Cambridge graduate, she will contribute to the "Study on Mechanism and Control Strategy of Obesity Complications".

On 14 December Prof. Tuomas Knowles visited CUNJC. He recently took over as project leader on "DropBioApp Engineering Droplet-based Microfluidic Platform for Biological Applications". Prof. Knowles discussed research progress and opportunities for commercialisation with Centre staff.



EVENTS AND EXCHANGE 活动与交流

On 24 November, more than 50 alumni of Cambridge and Oxford, as well as investors and entrepreneurs, met in the Nanjing Jiangbei New Area for CUNJC's Salon on Innovation and Entrepreneurship.

The salon aimed to strengthen the in–depth integration of technology and finance, to build international links and to strengthen the tech transfer and commercialisation ecosystem through a technology exchange platform.

Wenbin Chen, Member of the Party Working Committee and Deputy Director-General of the Management Committee of Jiangbei New Area, attending the meeting, along with Industrial Technology Research and Innovation Park management. After the meeting, a sharing session on innovation and entrepreneurship was held. Weiwei He, co-founder of BASiC Semiconductor and PhD of Cambridge, Aimin Zhu, Senior Partner of YiDa Capital and other guests made fantastic speeches surrounding the entrepreneurship and investment.









On 4 September, representatives of the British Consulate–General Shanghai visited CUNJC. Joshua Howey (Head of East China Outreach) and Jian Lu (Senior Officer) were joined by Rui Fu, Deputy Director of Jiangbei New Area's Managing Office for Life Science Industry. The meeting was hosted by Zhihui Zheng (Deputy General Manager).

The party had a tour of CUNJC's facilities and met with CUNJC 's researchers. Dr Yuanbo Deng, founder of the CUNJC-based start-up ReaVis and Cambridge alumnus, demonstrated new generation HUD products based on Cambridge research. The delegates exchanged views on CUNJC's development history, commercialisation progress and construction of innovative ecology.





On 20 October, a delegation organised by Jiangsu Association for Science and Technology visited CUNJC to prepare for the creation of an Offshore Innovation and Entrepreneurship Base for Overseas Talents in Jiangsu Province.



On 13 October, a delegation led by Zhaojun Wang, Deputy Director of Yancheng Municipal Bureau of Science and Technology, visited CUNJC to learn more about the collaboration between the University of Cambridge and Nanjing. The Department of Science, Technology, Innovation and Big Data Management of Jiangbei New Area contributed.



On 1 November, a delegation from Changzhou Science and Education Town visited CUNJC to learn about successful Sino-British cooperation in science and technology innovation.



On 20 November, a delegation from Changzhou Economic Development Zone visited CUNJC, to discuss potential future cooperation.





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