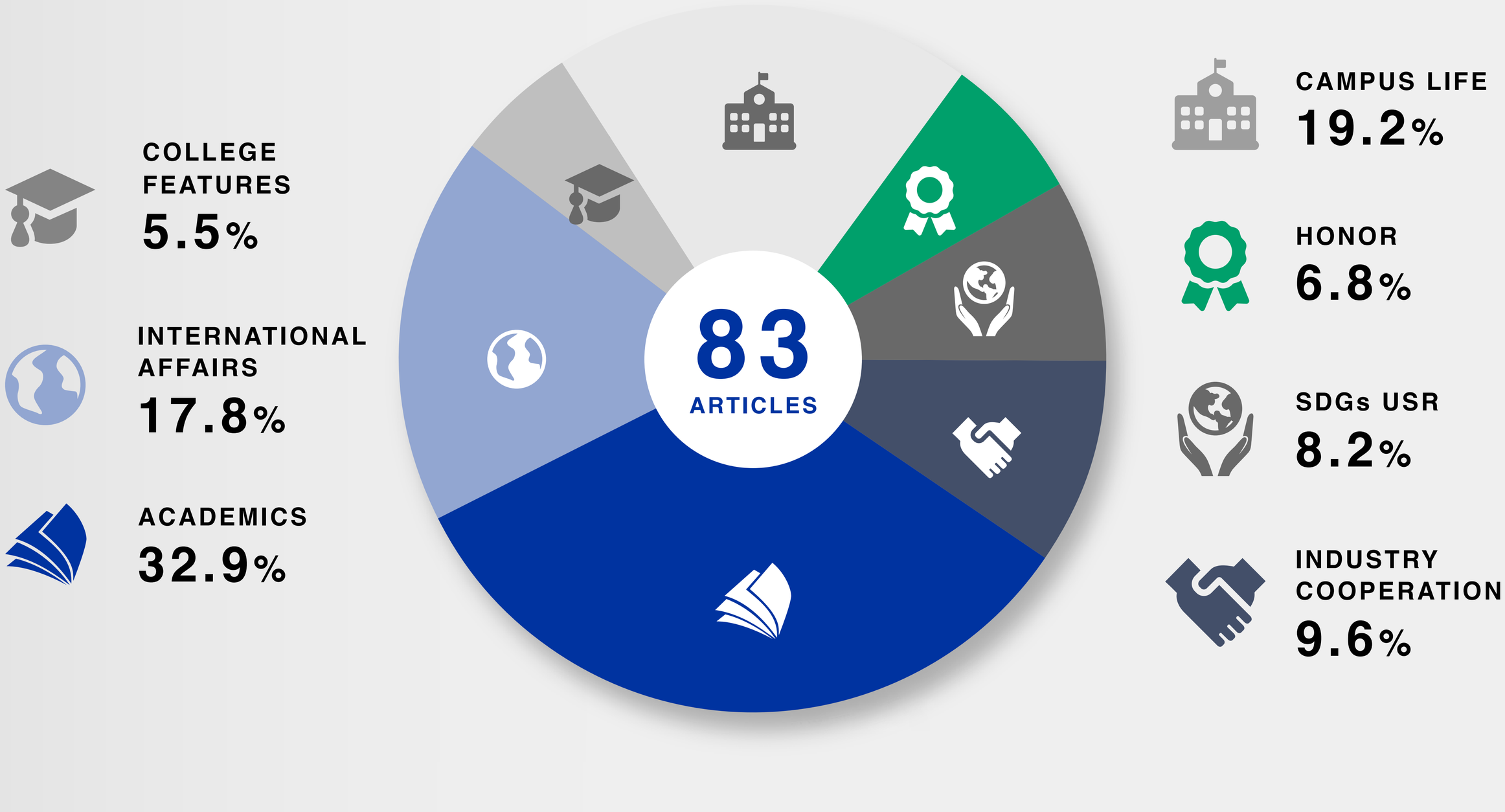
The News Annual Report of NYCU in 2023

In 2023, the NYCU website has published a **total of 83 news articles**, primarily **categorized into 7 main themes**: Honor, College Features, International Affairs, Campus Life, Academics/Research, Industry Cooperation, SDGs and USR.

Since the website redesign in October 2023, there has been a consistent **weekly update of at least 3 news articles**, each averaging a **minimum of 200 views (more than double the previous viewership)**. Among these, **the most popular news category** is **Industry Cooperation**. If an article mentions **TSMC**, the view count is significantly higher, **reaching up to 4 times more than the viewership of other news**.

Within the vibrant environment of NYCU, a series of innovative initiatives and collaborative efforts have emerged, propelling NYCU to the forefront of industry-academia collaboration and academic excellence. Next, we will guide you through a review of the top 10 trending news stories of 2023.

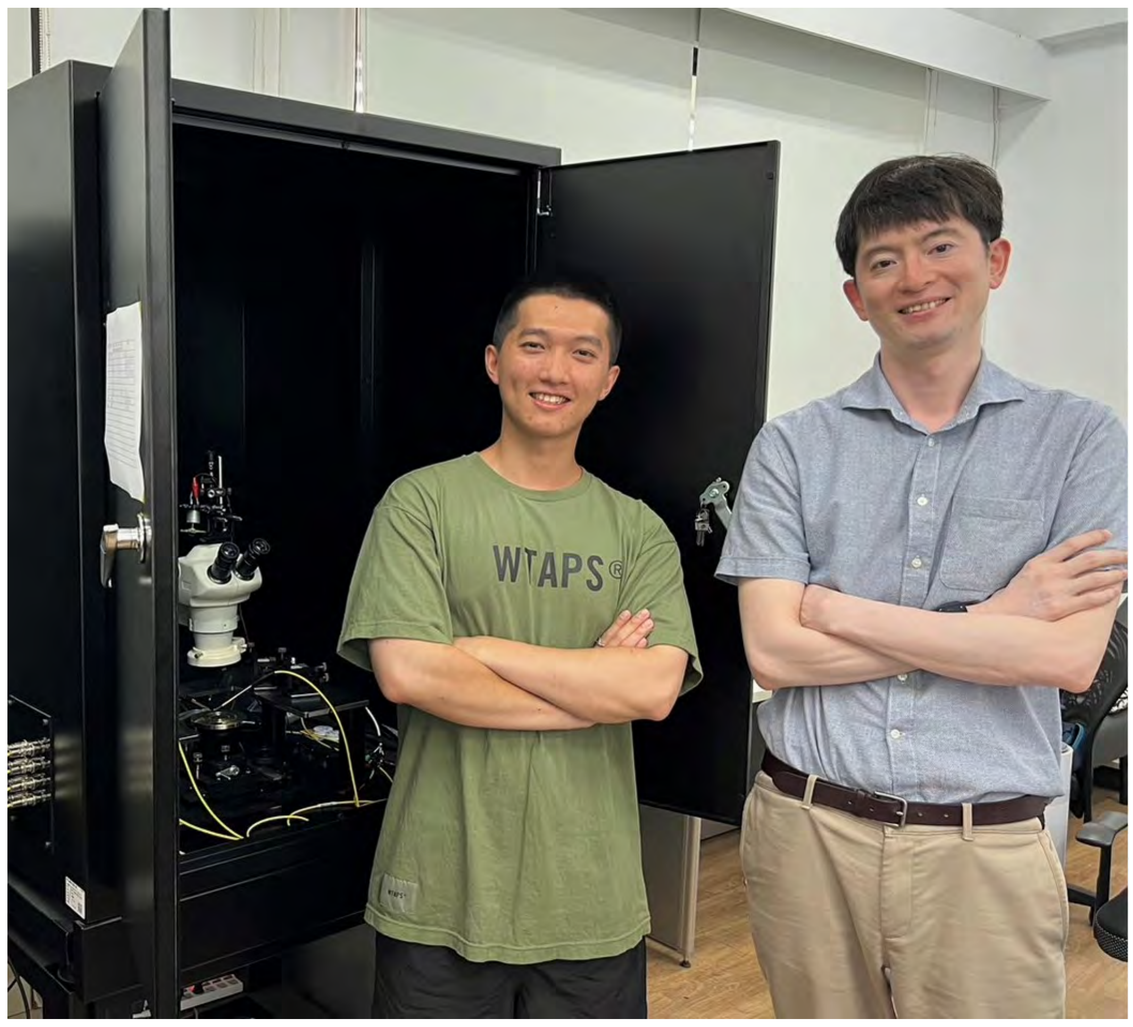
Pie Chart of NYCU 2023 Proportions for Each News Category



01.

Collaborating with TSMC to research and develop ultra-thin layer semiconductor technology.

The partnership between NYCU and TSMC, strengthened by the appointment of former TSMC CTOs Dr. Chenming Calvin Hu and Dr. Yuancheng Jack Sun as professors, yielded groundbreaking results announced on October 11, 2023. Led by Professor Der-Hsien Lien, their published photo-thermal method addresses challenges in adjusting threshold voltage as semiconductor components shrink. NYCU's commitment is evident through the establishment of new colleges and participation in global initiatives, such as the Semiconductor Workforce Advancement Program with Purdue University, solidifying its position as a leading force in semiconductor research.



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02.

Revolutionizing telecom with open-source technology in the 5G core for global impact.

Taiwan's leadership in adopting 5G has set the stage for digital transformation, paving the way for B5G and 6G advancements. Beyond mobile phones and base stations, the development of free5GC, an open-source 5G core network software by NYCU, showcases Taiwan's potential in global telecommunications equipment manufacturing. As a spin-off startup, Saviah Technologies has emerged from this initiative, focusing on core network software for 5G enterprise private networks. This progress signifies Taiwan's ascent as a major player in innovative technologies, contributing significantly to the global tech landscape.

Read full article

03.

Unveiling MR-based robotics advancement to boost automation efficiency.

Professor Kai-Tai Song and his NYCU team collaborated with Techman Robot Inc., the second-largest collaborative robot manufacturer, unveiling cutting-edge MR technology for intuitive path planning at ROSCon 2023. This MR-based robot allows frontline operators to set paths and tasks with hand gestures, enhancing human-robot interaction and revolutionizing automation efficiency.

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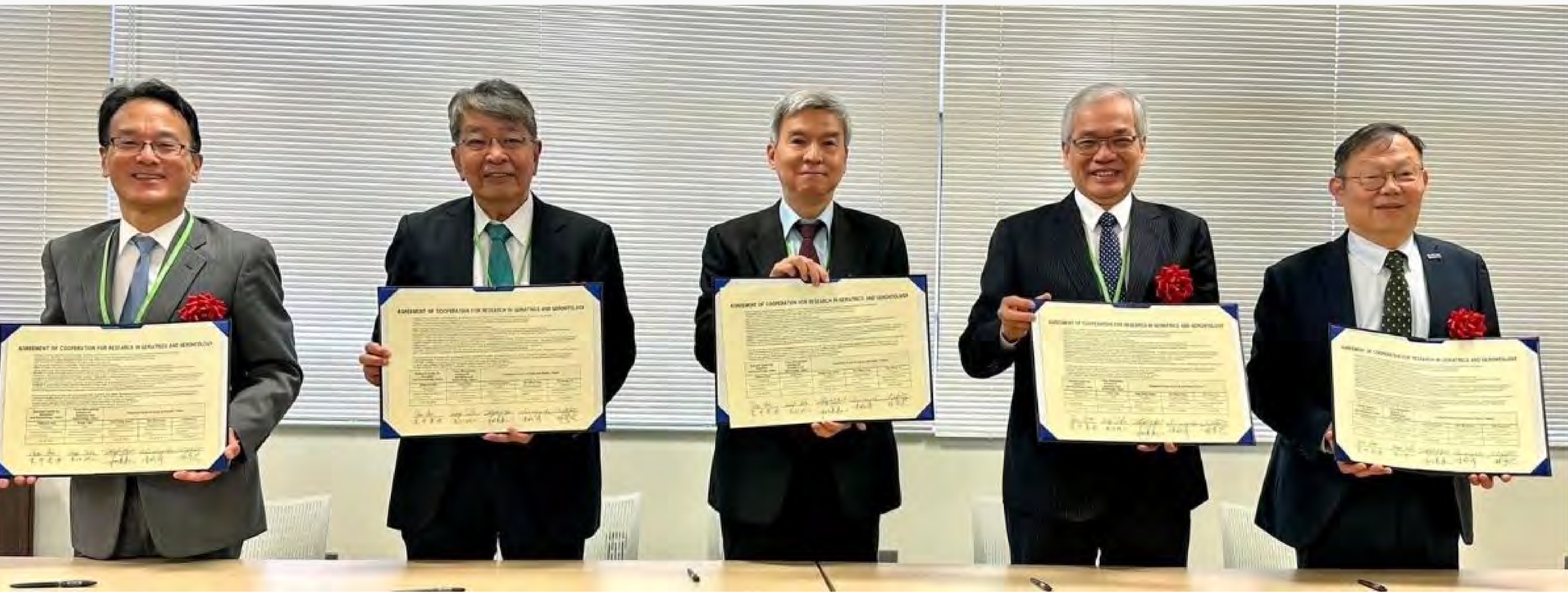
04.

Professor Chenming Hu was awarded the 2023 Presidential Science Prize, Taiwan's highest academic honor.

Renowned semiconductor expert Professor Chenming Hu, a lifetime chair professor at NYCU and a member of Academia Sinica, received the 2023 Presidential Science Prize for his groundbreaking work in semiconductor technology, including the invention of the ‘FinFET’ transistor. As the first CTO of TSMC, he played a crucial role in establishing Taiwan's global leadership in semiconductors. Beyond his contributions to geriatric medicine in collaboration with Japan, Professor Hu expressed a vision to empower Taiwan's youth by using the prize to establish an annual award through the Pan Wen Yuan Foundation.

Read full article



05.

Taiwan and Japan collaboratively address aging populations through a cooperation agreement between their national research institutions in medical research.

To address the challenges posed by an aging population, Taipei Veterans General Hospital (TVGH), NYCU, and the National Health Research Institutes (NHRI) have collaboratively established the "National Center for Geriatrics Health Integration Research" in Taiwan. They have formalized this collaboration with Japan's National Center for Geriatrics and Gerontology (NCGG) and the Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology (TMGHIG). The partnership aims to implement cutting-edge research for the health and well-being of elderly populations, leveraging equal research capabilities and resources from both nations. This collaborative platform emphasizes the practical application and dissemination of research outcomes, positioning it as a globally leading research unit.

Read full article

06.

NYCU and ACC jointly established the American Taiwan Climate Club through an MOU, aligning Taiwan with G7 Climate Club outcomes.

At the conclusion of COP28, NYCU and ACC signed an MOU to establish the American Taiwan Climate Club (ATCC), aiming for net-zero carbon emissions by 2050. The collaboration harnesses ACC's international experience to assist Taiwan in developing carbon standards aligned with global practices. With ACC's credentials in G7 countries, it assumes a pivotal role in global energy and climate security, as endorsed by US Congressmen. NYCU envisions Taiwan as a key contributor to environmental conservation, aiming to integrate international ESG projects through this partnership. The collaboration is expected to bring new vitality to Taiwan on the international stage of net-zero emissions.

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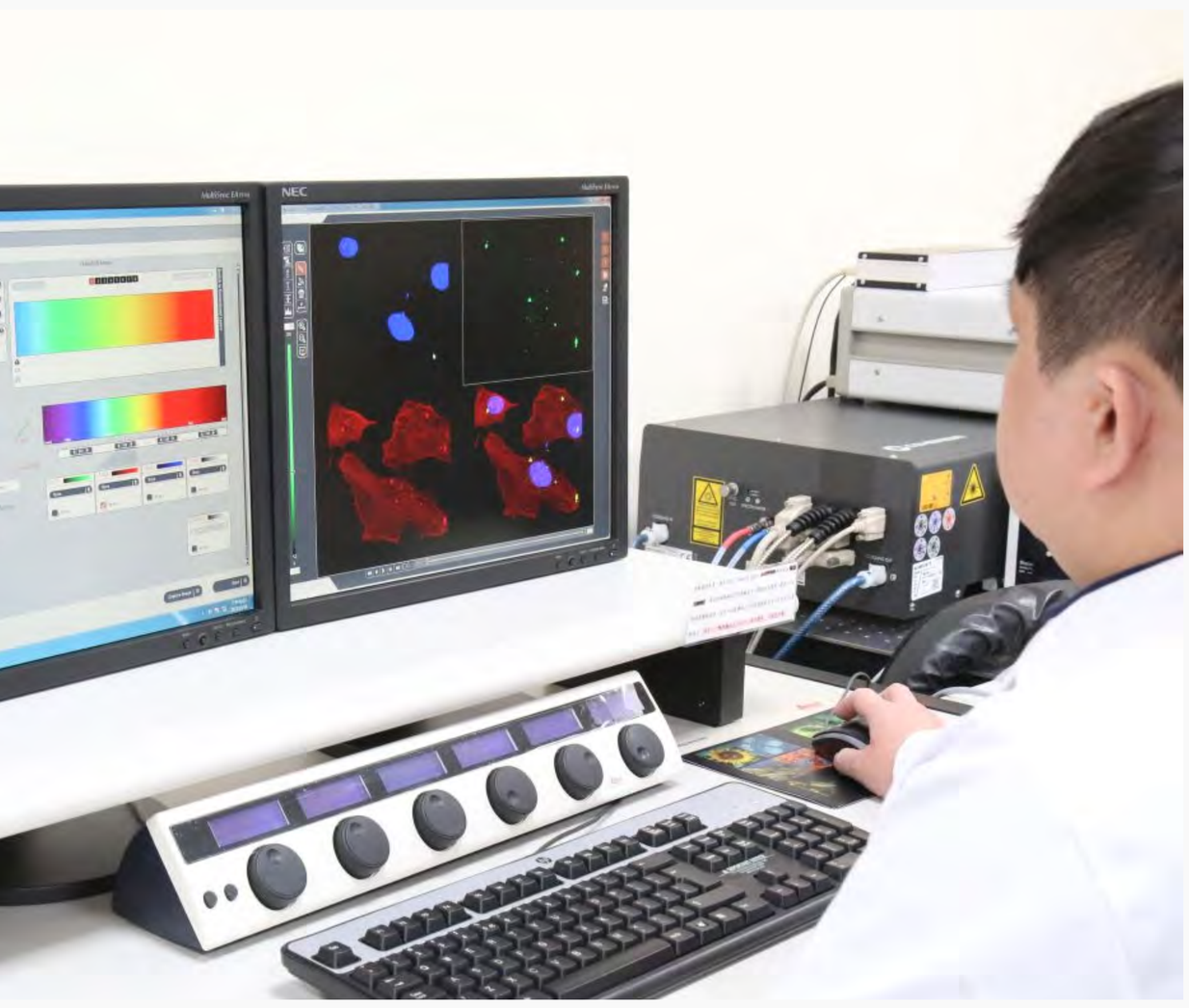

07.

Achieving a key breakthrough in cancer treatment through research on 'Nanoparticulophagy,' overcoming drug resistance.

Professor Jui-I Chao's team achieved a breakthrough in cancer treatment by identifying SQSTM1 as crucial in nanodrug delivery and effectiveness, particularly with albumin nanodrugs. This discovery enhances the release and anti-cancer activity of nanodrugs, opening new avenues in nanoparticulophagy. The study underscores the significance of SQSTM1 in nanoparticulosome formation, with its observed high expression in various cancers. The team is developing an innovative albumin-bound paclitaxel (Nab-PTX) drug, anticipating improved efficacy against cancer cells. Supported by national programs, the research is published in *ACS* Nano.

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08.

The Passing and Contributions of Semiconductor Pioneer Simon M. Sze

Renowned semiconductor expert Simon M. Sze passed away at 87 on November 6, 2023. Known as a semiconductor grandmaster, he played a crucial role in shaping Taiwan's semiconductor industry and provided key recommendations for IC technology introduction. Academician Sze's global influence spanned education, research, and semiconductor manufacturing, mentoring numerous leaders. His work, including the groundbreaking "Physics of Semiconductor Devices" and innovations like "Floating Gate Non-Volatile Semiconductor Memory," left an indelible mark. Recognized with prestigious awards, his over 30-year tenure at NYCU impacted countless talents, solidifying his legacy in the semiconductor industry.

Feature Column
Hung-Wen Lin (Trend Perspective Expert and Bestselling Author)

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09.

Deepening international collaboration, the partnership between the University of Illinois System and UIUC reaches new heights.

President Chi-Hung Lin led a delegation to sign four MOUs in engineering, medicine, and the humanities, expanding collaboration to include the College of Information Sciences. Discussions on a 3+2 double degree program are in progress. The Innovation Office at NYCU will establish a dialogue platform with the UIUC DPI. Joint seminars on medical topics aim to advance healthcare. Discussions between UIUC's College of Engineering and NYCU's College of Electrical Engineering focus on online course sharing, internships, dual-degree programs, and talent development. These visits aim to strengthen collaborations, foster innovation, and enhance academic and corporate ties, solidifying international connections.

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10.

The NYCU x VGH Intelligent Medicine Exchange Forum showcases successful integration of healthcare and technology.

On November 10, 2023, the NYCU School of Dentistry organized the NYCU x VGH Intelligent Medicine Cross-Disciplinary Exchange Forum, showcasing dual strengths in clinical service and technological innovation. President Chi-Hung Lin emphasized the significance of talent mobility in the ongoing merger, fostering collaborative efforts to unleash global research and development capabilities.

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Office of International Promotion and Outreach, National Yang Ming Chiao Tung University

Chief Executive Officer / Yen-Shen Chen
Deputy Chief Executive Officer / Jiun-De Lee
Editors / Yen-Chien Lai, Elaine Chuang
Art Design / Wei-Ting Chang

Address / 1001 University Road, East District, Hsinchu City 300093
Phone / +886-3-571-2121
E-mail / oipo@nycu.edu.tw