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National Taiwan University Official Quarterly

January 2026 . ISSUE 13

Nobel Physics Laureate Opens Taiwan Bridges Program

- Prof. Maniatis Leads SPE at NTU
- France-Taiwan Quantum Center to Strengthen Academic Collab
- NTU Devoted to Ethnic Equity

Ocean Program

With generous support from the Ocean Affairs Council, National Taiwan University's (NTU) International College and the National Museum of Marine Science and Technology (NMMST) jointly hosted a two-day immersive program, "Connecting Through the Ocean: Science × Culture × Community." This event, designed and coordinated by NTU's International Master's Program in Biodiversity (IMPB), drew nearly 70 participants from over 25 countries,……

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GLOBAL OUTLOOK

NTU Gamelan Gita Lestari Delivers Taiwanese-Indonesian Harmony to Japan

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Nurturing Global Leaders at the Heart of Geopolitics

Taipei — Just one year after its establishment in September 2024, National Taiwan University's School of Political Science and Economics (SPE) entered a new chapter with the appointment of its inaugural dean, Prof. Spyros Maniatis, following an extensive international search. A distinguished scholar in intellectual property and comparative law, Prof. Maniatis brings decades of academic leadership experience and a bold interdisciplinary vision to one of NTU's most forward-looking academic programs.

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GLOBAL OUTLOOK

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NTU Expands Academic Partnerships in Agricultural Science

Japan — During October 23-24, 2025, a delegation from National Taiwan University's College of Bioresources and Agriculture (CBA-NTU), led by Dean Yu-Pin Lin, visited two of Japan's top agricultural research institutions—...

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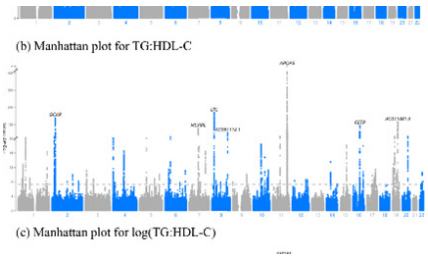
ACHIEVEMENTS



NTU Researchers Identify Gene Clusters Linked to Insulin Resistance in Taiwanese Population

A multidisciplinary research team from National Taiwan University (NTU) and other renowned institutions has made a significant breakthrough in understanding the genetic basis of insulin resistance (IR)—a key driver of metabolic and cardiovascular diseases. The study, published in *Nature Communications*, represents one of the...

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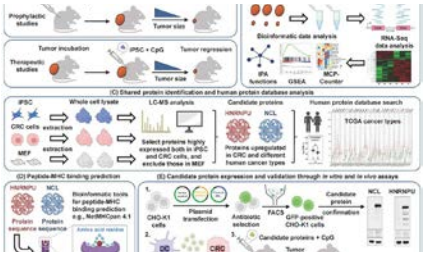

iPSC-based Vaccines: New Hope for Preventing and Treating Colorectal Cancer

Induced pluripotent stem cells (iPSCs) are pluripotent cells, generated through genetic reprogramming techniques, recognized for their high potential in disease modeling, drug discovery, and regenerative medicine. Previous studies have shown that iPSCs share many tumor-associated antigens with human cancer cells and ...

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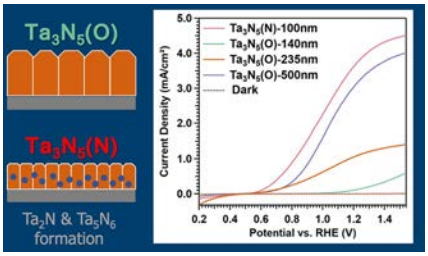

Doing More with Less — Reducing Material Usage in Light-Driven Energy Conversion

Converting sunlight into renewable fuels is a central goal of clean energy research. One promising approach is photoelectrochemical (PEC) water splitting, that is, using semiconductor electrodes to harness sunlight to split water into its two elements: hydrogen, a clean fuel, and oxygen. Among candidate materials, tantalum nitride...

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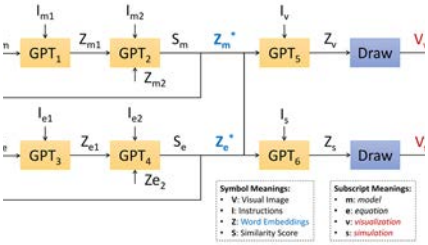

Multimodal AI Boosts Circular Economy Transformation

As the consumption of global resources mounts and human pressures on the environmental intensify, 1 the problem of balancing economic growth with sustainability 2 has become a shared challenge for governments, industries, and academia. The "circular economy" model is widely touted as a promising solution, yet identifying optimal strategies amid complex policies, industrial data, and resource flows in diverse contexts remains a formidable task.

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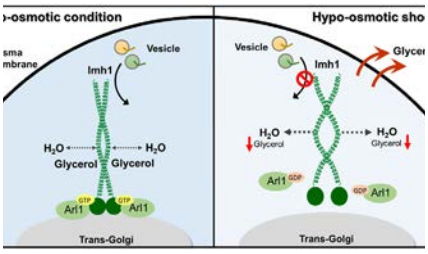

A Novel Discovery in the Regulation of Cellular Metabolism and Vesicle Transport

Intracellular organelles, bounded by biological membranes, reply on vesicle transport for nutrient exchange, signal transmission, material recycling, and waste processing—functions analogous to the circulatory system in the human body. Nearly a hundred genetic disorders, autoimmune diseases, and cancers have been linked to ...

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TEACHING & LEARNING

Max Planck–IAS–NTU Center Inaugurated in Taiwan

Taipei — On September 1, 2025, the Max Planck Society (MPG), the Institute for Advanced Study (IAS), and National Taiwan University (NTU) jointly inaugurated the Max Planck–IAS–NTU Center for Particle Physics, Cosmology, and Geometry. The inauguration ceremony was held at NTU's Leung Center for Cosmology and Particle Astrophysics (LeCosPA), commencing a new era of international collaboration at the frontiers of fundamental physics.

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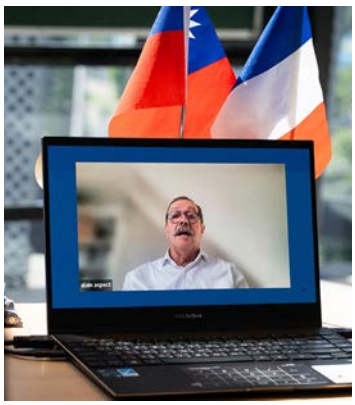

NTU Partners with Paris-Saclay and Grenoble Alpes to...

Taipei, October 13, 2025 — National Taiwan University (NTU) has joined ranks with Université Paris-Saclay and Université Grenoble Alpes to launch the France–Taiwan Quantum Center: Alain Aspect Program, a landmark ...

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Taiwan–Thailand Semiconductor Leaders Meet at NTU

Co-organized by the NTU Office of International Affairs and the College of Electrical Engineering and Computer Science (EECS), with support from the Thailand Trade and Economic Office (Taipei) and Thailand's Ministry of ...

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Building Global Pathways for Semiconductor Innovation

Taipei, Summer 2025 — National Taiwan University (NTU)'s International College, in collaboration with the Ministry of Foreign Affairs (MOFA) and the Taiwan ...

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Where Science Meets the Sea: NTU's Ocean Program Builds Global Awareness

With generous support from the Ocean Affairs Council, National Taiwan University's (NTU) International College and the National Museum of Marine Science and Technology (NMMST) ...

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PEOPLE

NTU Announces New Round of Top 100 Contributions

National Taiwan University (NTU) unveiled the second cohort of its Top 100 Contributions on November 7, highlighting 15 landmark achievements that reflect the university's far-reaching influence on Taiwan and the world. Building on the 24 contributions announced last year, NTU President ...

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From Advocacy to Action: NTU Leads Taiwan's Equity Effort in Higher Education

The Indigenous Students Resource Center (ISRC) at National Taiwan University (NTU) hosted the first Ethnic Equity in Higher Education Forum, convening over a hundred faculty members, students, administrators, and legislators to further dialogue on Indigenous inclusion in higher education...

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When Postcards Told Stories: NTU Exhibition Bridges...

Taipei — The National Taiwan University (NTU) Library proudly presents the "*Moments of the Everyday and the Extraordinary: Taiwan in Postcards from the Japanese Era.*" This special exhibition brings early 20th-century life into vivid ...

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NTU Celebrates 97 Years of Excellence and Global Leadership

National Taiwan University (NTU) marked its 97th anniversary on November 15 with a celebratory ceremony held at the NTU Sports Center. Presided over by President Wen-Chang Chen, the event welcomed ...

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FEATURES

Nurturing Global Leaders at the Heart of Geopolitics

Intro-video of Dean Spyros Maniatis.

Taipei — Just one year after its establishment in September 2024, National Taiwan University's School of Political Science and Economics (SPE) entered a new chapter with the appointment of its inaugural dean, Prof. Spyros Maniatis, following an extensive international search. A distinguished scholar in intellectual property and comparative law, Prof. Maniatis brings decades of academic leadership experience and a bold interdisciplinary vision to one of NTU's most forward-looking academic programs.

Dean Spyros Maniatis of the School of Political Science and Economics, at his desk.

Prof. Maniatis commenced his academic career at Queen Mary University of London, where he earned his doctorate and went on to become a pillar of the British legal academy. For more than a decade, he served as Director of the Centre for Commercial Law Studies (CCLS), founded by the renowned commercial law scholar Prof. Sir Roy Goode. Under his leadership, CCLS developed into a global

hub for legal education, attracting more than 1,500 graduate students from 120 countries each year.

Beyond expanding the school's international reach, Prof. Maniatis spearheaded the creation of several landmark interdisciplinary programs, including Law and Economics, Law and the Environment, and Art and Law, and launched dual-degree LLM partnerships with the University of Sorbonne and Singapore Management University (SMU). His work has redefined how law schools engage with the global economy and the arts, setting a new model for cross-border education.

In 2018, he was appointed Director of the British Institute of International and Comparative Law, where he broadened its research agenda to include technology and trade and human rights, bridging traditional legal studies with contemporary global challenges.

Reflecting on his career, Prof. Maniatis emphasizes two guiding principles: *international and comparative*. "It's not enough to look at one aspect only," he explains. "You have to bring everything together." In an era when human rights can reshape supply chains, environmental standards can alter trade policy, and AI governance can challenge both corporate and governmental ethics, his open approach feels particularly apt and timely.

That spirit of integration aligns perfectly with NTU's vision for SPE — a school designed to cultivate leaders capable of navigating the world's geopolitical and economic complexities with intellectual depth and social responsibility.

Having just arrived in Taiwan, Prof. Maniatis describes the island with genuine admiration. "Taiwan is a fascinating place," he says. "Here, geography, technology, trade, and geopolitics converge in a way that makes it uniquely positioned to train the next generation of problem-solvers and leaders."

He likens Taiwan's tech ecosystem to a beehive — a model of intricate coordination and innovation. "To keep the hive thriving, you must protect the queen," he notes, suggesting that nurturing global-minded talent is key to sustaining Taiwan's growth. Unlike conventional programs confined to a single discipline, NTU's School of Political Science and Economics seeks to cultivate *cross-domain leaders* who combine political insight, economic literacy, and managerial vision.

To advance this mission, the school offers an English-taught curriculum, a student body balanced between domestic and international enrollment, and integrated tracks in politics, economics, finance, leadership, and management. Mandatory internships and overseas study modules ensure that every student gains both in-depth theoretical understanding as well as precious real-world experience.

The model has already proven successful. The school's first admissions cycle was nearly full, drawing competitive applicants from across the globe and attracting Nobel-level scholars as visiting lecturers.

Dean Maniatis holding a regular meeting with the members of SPE.

Dean Maniatis responding to a question in the interview.

Dean Maniatis inspecting the blueprint of the future building for SPE.

Dean Maniatis stepping out of the construction site.

Building a new school, however, is no simple task. Such challenges as team integration, resource coordination, and international recruitment demand patience, dedication, and vision. Yet Prof. Maniatis remains characteristically optimistic. He aims to leverage Taiwan's technological strengths and strategic position to make NTU's SPE a vibrant hub for interdisciplinary research and innovation — a place where global scholarship takes root and flourishes.

He believes the school can become a cradle for nurturing global leaders — individuals defined not only by academic excellence but by cross-disciplinary insight and a sense of social purpose. "Taiwan exports world-class products and chips," he says. "Now it's time to export ideas and influence."

Drawing from his legal background, Prof. Maniatis envisions SPE as a platform for "law, technology, and policy in dialogue." The school will focus on emerging issues such as AI governance, data regulation, and intellectual property, while fostering collaboration among policymakers, scholars, industry leaders, and NGOs.

"Our goal," he concludes, "is to build a truly interdisciplinary platform where research and leadership come together — enabling voices from Taiwan to shape policy, influence industry, and inspire change around the world."

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GLOBAL OUTLOOK

Nobel Laureate Sir Andre Geim Opens NTU's Taiwan Bridges Program

Taipei — On November 10, National Taiwan University (NTU) hosted the inaugural lecture of the newly launched Taiwan Bridges Program, marking the beginning of one of the most ambitious academic exchange initiatives in Taiwan's history. NTU joins Academia Sinica and 10 partner institutes nationwide to invite 31 Nobel laureates to Taiwan between 2025 and 2026, fostering high-level dialogue between global scientific leaders and Taiwan's academic community.

The opening event held at NTU's Shih-Liang Chien Lecture Hall in the Zonghe Lecture Building and was part of the "Raymond Soong Chair Professorship of Distinguished Research," established with the generous support of Mr. Raymond Soong, the founder of Lite-On Technology. The keynote speaker—Prof. Sir Andre Geim of the University of Manchester, recipient of the 2010 Nobel Prize in Physics—set the tone for the program's international vision and intellectual ambition.

Prof. Sir Andre Geim, 2010 Nobel Laureate in Physics.

A Nobel Laureate Who Blends Scientific Rigor with Creative Curiosity

Sir Andre Geim is internationally renowned for discovering graphene, the first known two-dimensional material composed of a single layer of carbon atoms. Its extraordinary strength, conductivity, and versatility revolutionized nanotechnology and opened new frontiers in electronics, energy, and biomedical research. For this groundbreaking work, Geim shared the 2010 Nobel Prize in Physics with Konstantin Novoselov.

But Geim's scientific persona is also marked by humor and unconventional thinking. His famous experiment levitating a frog using a magnetic field earned him the Ig Nobel Prize, an accolade that he embraces as a celebration of curiosity-driven science. His career exemplifies a rare combination of intellectual rigor, imagination, and playfulness.

A Full House at NTU: Dialogue Across Generations

The lecture drew a capacity audience of faculty, students, and researchers eager to hear from one of the world's most innovative physicists. Following the keynote, students actively engaged Geim with questions ranging from foundational physics to research creativity.

In addition to the public lecture, Sir Andre Geim is scheduled to meet with faculty and young scholars from NTU's Department of Physics for a smaller, in-depth discussion on research challenges, emerging scientific directions, and the value of cross-disciplinary thinking.

NTU leaders expressed hopes that such exchanges will inspire students to pursue bold ideas, cultivate global perspectives, and engage with the scientific community beyond Taiwan's borders.

Building a Bridge to the Future: Taiwan's Momentum Toward Global Engagement

The inaugural lecture not only launched the Taiwan Bridges Program but also highlighted NTU's commitment to fostering meaningful international dialogue across science, humanities, and society. NTU will continue collaborating closely with Academia Sinica and the International Peace Foundation to welcome world-leading scholars to Taiwan.

By building a "bridge of knowledge" that links Taiwan with the global academic community, NTU aims to become a vibrant hub for innovation, peacebuilding, and future-oriented leadership—a place where ideas cross borders and inspire new generations.

President Ching-te Lai, Honorary Chairman of the Taiwan Bridges Program.

NTU President Wen-Chang Chen delivers his opening remark.

Academia Sinica President James Liao: Deepening Two-Way Exchange to Showcase Taiwan's Scientific Strength.

Academician Yuan-Tseh Lee: At the Heart of Science Lies Humanity and Responsibility.

From left to right: Uwe Morawetz (Chair, International Peace Foundation), Raymond Soong (Founder, Lite-On Group), Wen-Chang Chen (President, NTU), Prof. Sir Andre Geim (2010 Nobel Laureate in Physics), President Ching-te Lai, James Liao (President, Academia Sinica), Academician Yuan-Tseh Lee (Former President, Academia Sinica), Ying-yao Cheng (Minister of Education), Cheng-wen Wu (Minister, National Science and Technology Council), and NTU Vice President Wan-Jiun Liao.

GLOBAL OUTLOOK

NTU and Tohoku University Renew Ties and Launch New Joint Initiatives

A delegation from Tohoku University, led by President Teiji Tominaga and joined by Executive Vice President Toshiya Ueki, Vice President Fumihiko Imamura, Vice President Atsuhiro Nakagawa, and senior administrators, visited NTU. NTU President Wen-Chang Chen personally welcomed the delegation, accompanied by Deputy Vice President for Research and Development Hsueh-Fen Juan, Associate Dean of the College of Medicine Nai-Cheng Cheng, and Assistant Vice President for International Affairs Andrew Tsung.

On September 11, 2025, National Taiwan University (NTU) warmly welcomed a high-level delegation from Tohoku University, Japan. Led by President Teiji Tominaga, the delegation included Executive Vice President Toshiya Ueki, Vice President Fumihiko Imamura, Vice President Atsuhiro Nakagawa, and other senior administrators. NTU President Wen-Chang Chen personally hosted the visit, joined by Deputy Vice President for Research and Development Hsueh-Fen Juan, Associate Dean of the College of Medicine Nai-Cheng Cheng, and Executive Director for International Affairs Andrew Tsung.

President Wen-Chang Chen (right) and President Teiji Tominaga (left) renewed the inter-university agreement and the student exchange agreement, and formally launched the bilateral seed funding program—strengthening and deepening the long-standing research partnership between NTU and Tohoku University.

The meeting centered on strengthening NTU–Tohoku University collaboration across multiple levels and concluded with a formal signing ceremony. The two universities renewed both the inter-university agreement and the student exchange agreement, and officially launched a bilateral seed funding program—important milestones that further solidify their long-standing partnership.

During the dialogue, both institutions identified promising opportunities for collaboration in disaster science, artificial intelligence, life sciences, and sustainability. They also emphasized the pivotal role of seed funding and joint research centers in enabling long-term, impactful cooperation. Student and faculty mobility was another key focus, including exchange programs, short-term research and study opportunities, and NTU's "Beyond Borders" initiative—all designed to broaden the global perspectives of emerging scholars.

Following the academic discussions, the delegation visited the NTU Cancer Center, where Superintendent Chih-Hsin Yang and senior clinicians hosted an in-depth exchange on future avenues for biomedical research collaboration.

This visit marks a new chapter in the NTU–Tohoku University partnership, deepening bilateral ties while opening new pathways for cross-border and cross-disciplinary cooperation. As NTU approaches its centennial celebration in 2028, NTU look forward to welcoming Tohoku University back to campus to celebrate this milestone and to advancing meaningful international collaboration in the years ahead.

Both universities expressed strong commitment to expanding student and faculty mobility—including exchange programs, short-term study opportunities, and NTU Beyond Borders—to broaden the global outlook of young scholars.

During the meeting, the two sides discussed collaboration in disaster science, artificial intelligence, life sciences, and sustainability, and emphasized the importance of seed funding and joint research centers in supporting long-term cooperation.

The delegation visited the NTU Cancer Center, where Superintendent Chih-Hsin Yang, together with several deputy superintendents and division directors, hosted an in-depth exchange.

Delegates toured NTU Cancer Center's latest clinical facilities and equipment and learned about the Center's major research achievements.

GLOBAL OUTLOOK

NTU Wins Brandon Hall Award for Career Innovation

Share:

NTU Career Center wins the 2025 Brandon Hall Group Bronze Award for Excellence in Competencies and Skill Development.

Taipei — National Taiwan University's (NTU) Career Center has garnered international acclaim for its "Empowering Future Talent" initiative, receiving the Bronze Award for Best Competencies and Skill Development in the Learning & Development category at the 2025 Brandon Hall Group HCM Excellence Awards.

The certificate of the 2025 Brandon Hall Bronze Award for NTU Career Center's "Empowering Future Talent" initiative.

Widely considered the "Oscars of the HR industry," the Brandon Hall Awards recognize outstanding achievements in human capital management, learning, and talent development worldwide. Competing with leading global corporations and other top universities, NTU distinguished itself through a comprehensive, sustainable, and scalable career development framework that demonstrates measurable impact and long-term value.

The heart of the *Empowering Future Talent* initiative is its mission to bridge the gap between education and employment. The program is focused on career exploration, professional empowerment, and workforce readiness, providing

students with an integrated ecosystem of industry-academia partnerships. Through tailored courses, workshops, and interdisciplinary collaborations with global enterprises, NTU students strengthen their core competencies in problem-solving, cross-cultural communication, and leadership—equipping them with the essential skills needed for a diverse and rapidly changing global workplace.

Vice President for Student Affairs Shi-Wei Chu praised this achievement as a true milestone in NTU's ongoing commitment to student success. "This award affirms the dedication of our Career Center team and reflects NTU's growing influence in global career education," he said. "We will continue advancing sustainable talent development and fostering international collaboration to empower the next generation of leaders."

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GLOBAL OUTLOOK

NTU Gamelan Gita Lestari Delivers Taiwanese-Indonesian Harmony to Japan

Condong, danced by *Keisha Anggita Pramesti. (Photo by Misato Bali Festival Executive Committee)*

Shimane, Japan — NTU Gamelan Gita Lestari made its international debut at the "Misato Bali Festival 2025" on October 12, 2025, in Misato-cho, Shimane Prefecture, Japan, marking a milestone in Taiwan's cultural diplomacy through music. The ensemble also held a pre-tour concert at the NTU University Players Theater on October 8. Showcasing NTU's vibrant engagements with global arts and cross-cultural collaboration, both performances received enthusiastic applause from the audiences.

After the performance, group photo. *(Photo by Misato Bali Festival Executive Committee)*

Gamelan, Indonesia's most iconic percussion ensemble, represents a cornerstone of Southeast Asian musical heritage. The Central Javanese and Balinese traditions are particularly eminent — the former emphasizing refinement and introspection, while the latter is dynamic-- deeply intertwined with Balinese religious life and ever-evolving, now embracing nearly 30 distinct styles. Among these styles, gamelan gong kebyar stands out for its explosive energy and shifting rhythms, requiring extraordinary precision and virtuosity by the performers. The older and

more compact gamelan angklung, on the other hand, is typically performed in ceremonies, such as cremations and community rituals.

Founded in 2018 by Distinguished Professor Ying-fen Wang of NTU's Graduate Institute of Musicology (GIM), Gamelan Gita Lestari has been mentored since its inception by the internationally acclaimed Balinese composer I Nyoman Windha. The ensemble holds Taiwan's only set of gamelan gong kebyar instruments, complementing the gamelan angklung ensembles at four other Taiwanese universities. Its current members include faculty, students, and alumni from NTU and National Taiwan Normal University (NTNU), representing a diverse community of musicians from Taiwan, Hong Kong, Japan, Korea, Indonesia, and Malaysia—each bringing unique cultural and academic perspectives from musicology, anthropology, and ecology.

For the two performances, the group was joined by Pak Windha, his dancer wife I Gusti Agung Ayu Warsiki, and their granddaughter Keisha Anggita Pramesti, along with Indonesian dancers based in Taiwan for the pre-tour concert and Japanese dancers for the Misato performance. The collaborative exchange embodied the spirit of intercultural dialogue through performance.

The concert program featured classical Balinese works, Windha's signature compositions, and two new pieces that integrated Taiwanese musical influences. One, arranged by Windha, reimagined NTU's underground school song "*Longing for the Spring Breeze*" for gamelan angklung. The other, composed by Yi-hsiu Yang, a master's student at GIM and recipient of the 2024 Global Music Award, used gamelan gong kebyar to reinterpret Taiwan's traditional beiguan music, blending Taiwanese folk expression with Balinese sonorities.

Through these performances, NTU Gamelan Gita Lestari not only celebrated the shared heritage of Asian musical traditions but also strengthened Taiwan's cultural presence on the international stage — demonstrating how music, through its universal language, continues to unite communities and transcend borders.

Demonstration of gamelan angklung. *(Photo by Yu-Chung Chen)*

Gangsa in gamelan gong kebyar, led by Ugal, the largest instrument in the center. *(Photo by Yu-Chung Chen)*

I Nyoman Windha playing the drum and Ying-fen Wang playing the gong. *(Photo by Yu-Chung Chen)*

Topeng Tua, a dance traditionally performed on ceremonial occasions. *(Photo by Yu-Chung Chen)*

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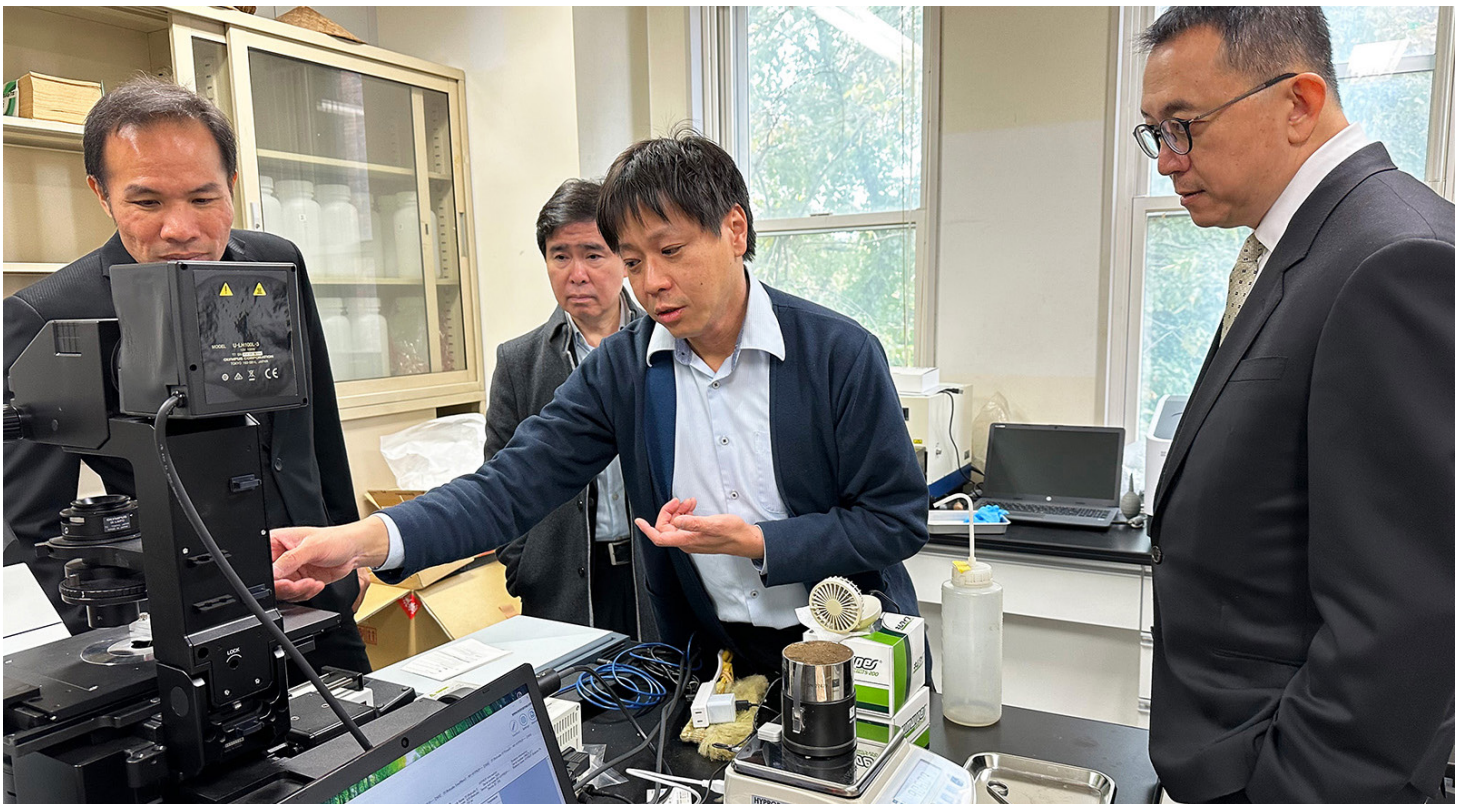
GLOBAL OUTLOOK

NTU Expands Academic Partnerships in Agricultural Science



Dean Yu-Pin Lin (second from left), Professor Feng-Cheng Chang (left), and Associate Dean Chih-Hao Fan (right) visiting laboratories at Hokkaido University's Graduate School of Agriculture.

Japan — During October 23-24, 2025, a delegation from National Taiwan University's College of Bioresources and Agriculture (CBA-NTU), led by Dean Yu-Pin Lin, visited two of Japan's top agricultural research institutions—Hokkaido University and Tohoku University—to deepen academic collaboration and foster global engagement in the agricultural sciences.

The visit commenced on October 23 at Hokkaido University's Graduate School of Agriculture, with which CBA-NTU has established a Dual Doctoral Degree Program. The first round of student recruitment for the program will be announced soon. During the meeting, Prof. Feng-Cheng Chang, Chair of the School of Forestry and Resource Conservation, and Prof. Yi-Chen Lo, Chair of the Graduate Institute of Food Science and Technology, met with counterparts from Hokkaido University to discuss potential joint research directions and future cooperation.

Dean Yu-Pin Lin (left) and Dean Haruki Kitazawa (right), Graduate School of Agricultural Science at Tohoku University, exchanging gifts to commemorate the visit.

Hokkaido University also arranged an in-depth discussion between their faculty specializing in bioenvironmental engineering and Dean Lin and Associate Dean Chih-Hao Fan. Both sides expressed strong interest in promoting collaborative research, enhancing faculty and student engagement, and expanding the dual-degree framework.

On October 24, the delegation next visited the Graduate School of Agricultural Science at Tohoku University, where fruitful discussions were held on launching dual degree programs and establishing a joint research center. The two sides also expressed interest in establishing collaborations in forestry and food science, which had been earmarked as key areas for partnership.

Tohoku University demonstrated its sincere interest in formalizing cooperation with CBA-NTU by suggesting that the signing of a Memorandum of Understanding (MoU) be prioritized-- to open the way for future faculty exchanges, student mobility, and international joint research initiatives.

During the visit, Dean Lin and his entourage of faculty members held warm and productive discussions with their Japanese counterparts, generating academic synergy and issuing in a shared commitment to advance agricultural science and sustainability. Both Hokkaido University and Tohoku University praised CBA-NTU's achievements in bioresources, environmental research, and sustainable development, and expressed sincere interest in establishing long-term collaborations with CBA-NTU.

The visit succeeded in strengthening NTU's academic network with Japan's leading agricultural universities. It also elevated the College's global presence and influence in the fields of agriculture, life science, and environmental sustainability, marking an important step forward in NTU's mission to foster world-class partnerships in research and education.

Dean Yu-Pin Lin (left) and Dean Haruki Kitazawa (right), Graduate School of Agricultural Science at Tohoku University,

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ACHIEVEMENTS

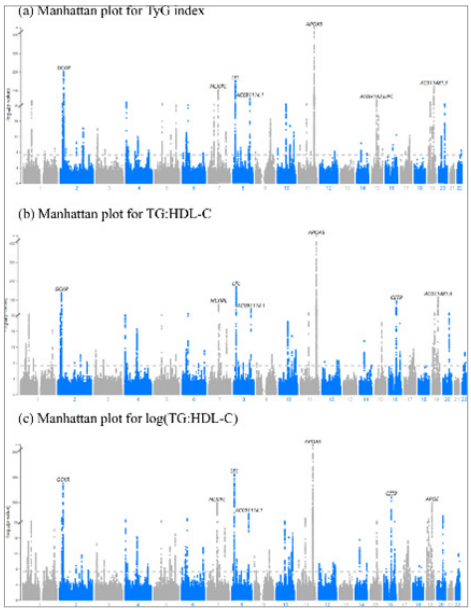
NTU Researchers Identify Gene Clusters Linked to Insulin Resistance in Taiwanese Population

A multidisciplinary research team from National Taiwan University (NTU) and other renowned institutions has made a significant breakthrough in understanding the genetic basis of insulin resistance (IR)—a key driver of metabolic and cardiovascular diseases. The study, published in *Nature Communications*, represents one of the most comprehensive genome-wide association studies ever conducted in an East Asian population.

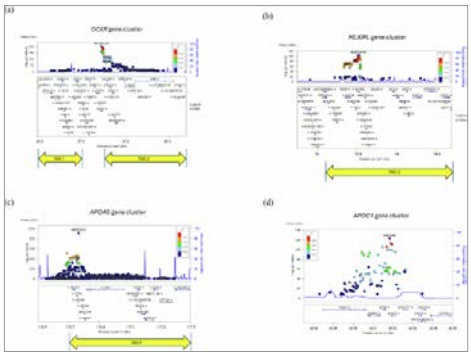
Distinguished Professor Po-Hsiu Kuo of NTU, Professor Shih-Jen Tsai, Dr. Eugene Lin, and colleagues from other leading institutions formed the research team. They utilized data from the Taiwan Biobank to examine genetic variants associated with surrogate markers of insulin resistance in 147,880 Taiwanese adults. Two IR markers were used: the triglyceride-to-HDL-cholesterol (TG:HDL-C) ratio and the TyG index, calculated from fasting glucose and triglyceride levels.

Through large-scale genomic analysis, the team identified genome-wide significant associations across four gene clusters—GCKR, MLXIPL, APOA5, and APOC1—which play critical roles in lipid metabolism and glucose regulation. These findings reveal 197 genes linked to insulin resistance, providing new insights into how metabolic pathways are genetically regulated. Transcriptome-wide association studies further showed that these gene clusters are most active in adipose tissue, emphasizing the importance of fat metabolism in insulin signaling. Gene ontologyand pathway analyses indicated that these loci are involved not only in glucose homeostasis and lipid transport but also in neurodegenerative disease pathways, including Alzheimer's disease. The study also identified sex-specific genetic effects, underscoring biological differences in how insulin resistance develops among men and women. Importantly, polygenic risk score analyses connected both IR markers to an increased predisposition to gout and hyperlipidemia, revealing overlapping genetic architectures among metabolic disorders.

Beyond its scientific contributions, this research exemplifies the growing impact of precision genomics in Taiwan. By integrating high-quality population data with advanced bioinformatics, NTU researchers demonstrated the value of the Taiwan



The Manhattan plots for the identified SNPs associated with the three IR surrogate markers, including a the TyG index, b TG:HDL-C ratio, and c log(TG:HDL-C) ratio.



The locus zoom plot for the a GCKR, b MLXIPL, c APOA5, and d APOC1 gene clusters concerning the TyG index in the Taiwan Biobank illustrates single nucleotide polymorphisms (SNPs) by their chromosomal positions and their association with TyG (–log10 P).

Click or Scan the QR code to read the full article in *Nature Communications*.

Biobank as a powerful resource for uncovering disease mechanisms relevant to East Asian populations—groups that have been historically underrepresented in global genomic studies.

Professor Kuo emphasized that the study "not only enhances our understanding of the genetic architecture of insulin resistance but also opens pathways for developing ancestry-calibrated predictive tools for metabolic health." Professor Tsai added that future work will focus on translating these discoveries into preventive and therapeutic strategies, particularly for conditions at the intersection of metabolism and brain health.

This landmark study underscores NTU's leading role in advancing equitable precision medicine and highlights Taiwan's growing contribution to global genomics and translational health research.

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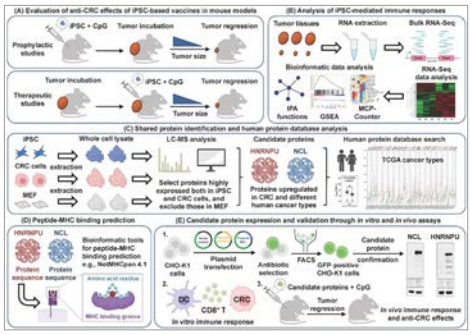
ACHIEVEMENTS

iPSC-based Vaccines: New Hope for Preventing and Treating Colorectal Cancer

Induced pluripotent stem cells (iPSCs) are pluripotent cells, generated through genetic reprogramming techniques, recognized for their high potential in disease modeling, drug discovery, and regenerative medicine. Previous studies have shown that iPSCs share many tumor-associated antigens with human cancer cells and can prevent tumor formation in various cancer-bearing mouse models, including breast, skin, and pancreatic cancers. However, the precise molecular mechanisms have not been deciphered, and whether iPSCs potentially could be developed into therapeutic cancer vaccines remains unknown.

A research team led by Prof. Tzu-Tang Wei of the Department and Graduate Institute of Pharmacology, National Taiwan University College of Medicine, has discovered that cell lysates prepared from iPSCs, when combined with the immune adjuvant CpG, can prevent as well as treat colorectal cancer growth in mouse models. Through mass spectrometry analysis and computational prediction, the team identified that HNRNPU and NCL proteins are highly expressed in both iPSCs and colorectal cancer cells but expressed at low levels in healthy cells. Cellular and animal experiments further confirmed that these two candidate proteins can be presented by dendritic cells to activate T cells, to elicit an immune response against colorectal cancer. These findings confirm the potential of iPSCs as vaccines for colorectal cancer and disclose their underlying immune mechanisms, providing a new foundation and perspective for the development of cancer immunotherapies and cancer vaccines.

These breakthrough findings were published on April 28, 2025 in *Theranostics*, a leading journal in the biomedical field. Prof. Wei was the corresponding author, and graduate students Si-Han Jwo, Shang-Kok Ng, and Chin-Tzu Li were equal co–first authors. Observing that the project took more than six years to complete, Prof. Wei expressed his gratitude to National Taiwan University and the National Science and Technology Council for their generous support. The team continues to undertake translational research on cancer vaccines.



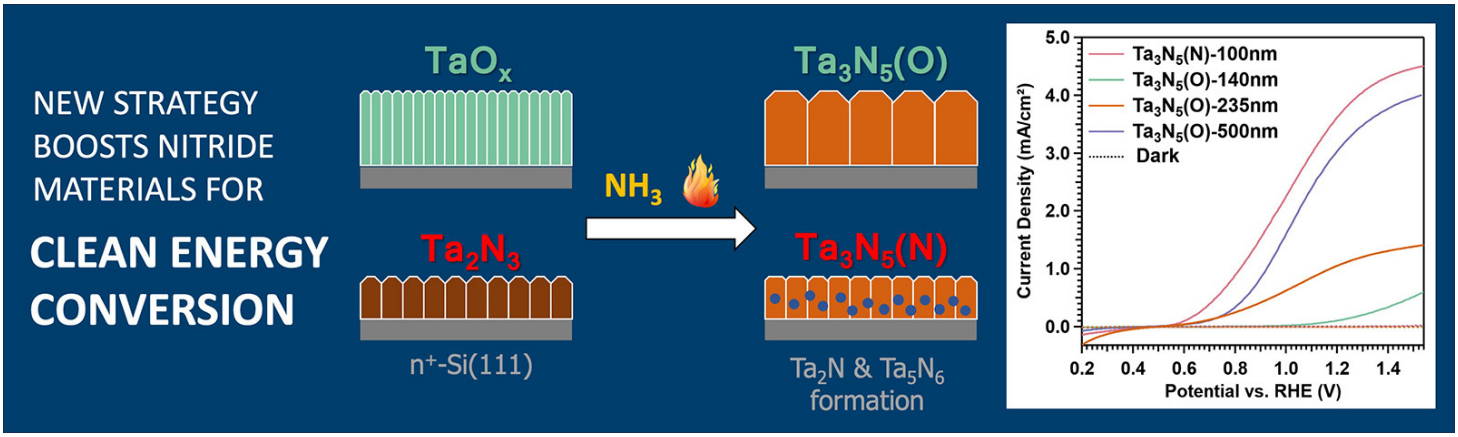
Overview of antigen prediction and testing of the potential iPSC-based vaccine for treating as well as preventing colorectal cancer.

Prof. Wei's research group at NTU.

Click or Scan the QR code to read the full article published in *Theranostics*.

ACHIEVEMENTS

Doing More with Less — Reducing Material Usage in Light-Driven Energy Conversion

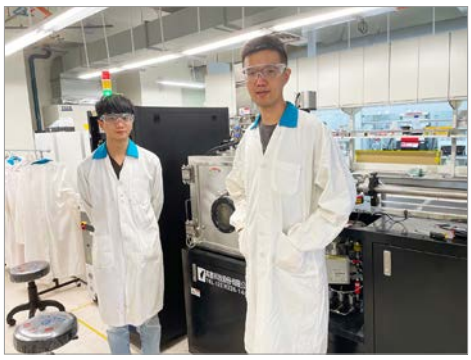


New strategy boosts Nitride materials for clean energy conversion.

Converting sunlight into renewable fuels is a central goal of clean energy research. One promising approach is photoelectrochemical (PEC) water splitting, that is, using semiconductor electrodes to harness sunlight to split water into its two elements: hydrogen, a clean fuel, and oxygen. Among candidate materials, tantalum nitride (Ta_3N_5) has long been attractive because it efficiently absorbs visible light. However, its performance has been limited by poor electrical conductivity, requiring thick films that consume large amounts of tantalum—a rare and costly element.

In a new study published in *Small*, researchers in the Department of Chemistry at National Taiwan University present a breakthrough approach to tackling this challenge. By starting with a chemically engineered precursor called bixbyite-type Ta_2N_3, the team has developed ultrathin Ta_3N_5 photoanodes that operate efficiently while using far less tantalum. Unlike conventional methods, this strategy naturally produces small amounts of highly conductive subnitride phases at the interface with silicon support. Rather than being detrimental, these conductive impurities act like "highways" for charge carriers, helping electrons and holes move more efficiently and reducing the losses that usually limit Ta_3N_5.

The resulting photoanodes demonstrate significantly improved charge separation and photocurrent output, even at reduced thickness. In effect, less tantalum is



The lead author, Mr. Chia-Wei Chang, and Dr. Chang-Ming Jiang, standing in front of the reactive sputter deposition system used in this study.

Click or Scan the QR code to read the full article published in *Small*.

required yet performance is maintained or even enhanced. By applying advanced structural, optical, and electrochemical characterization, the researchers showed that the improved efficiency arises from innovative smart interface engineering between Ta_3N_5 and silicon.

“By rethinking how we design the interface, we can make Ta_3N_5 much more efficient without relying on thick, resource-intensive films and substrates,” remarks Dr. Chang-Ming Jiang, an assistant professor in the Department of Chemistry and the corresponding author of the study. “This was only possible because NTU invested in a state-of-the-art reactive sputter deposition system, which allowed us to access the metastable Ta_2N_3 precursor. That infrastructure support was crucial for enabling this discovery.”

Beyond water splitting, the insights from this work highlight a versatile design principle for other thin-film semiconductors, offering a blueprint for more efficient and sustainable solar energy technologies.

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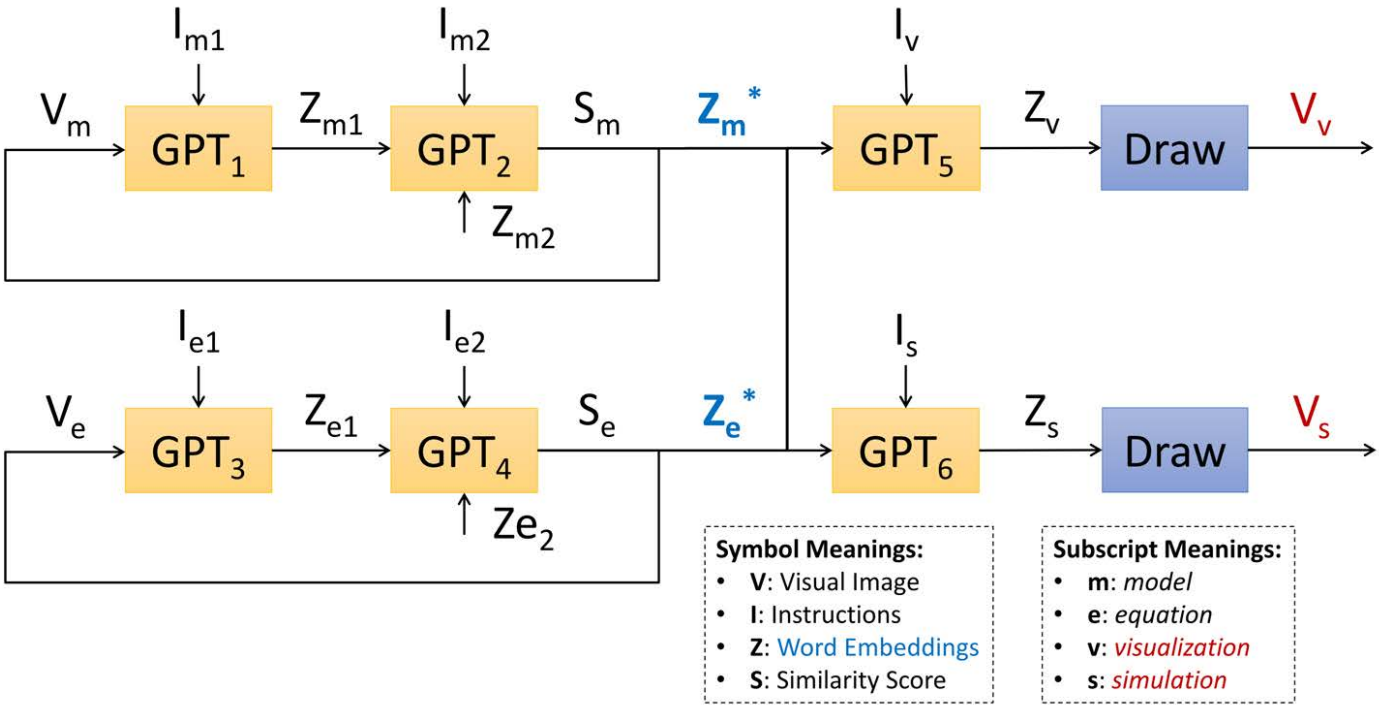
ACHIEVEMENTS

Multimodal AI Boosts Circular Economy Transformation

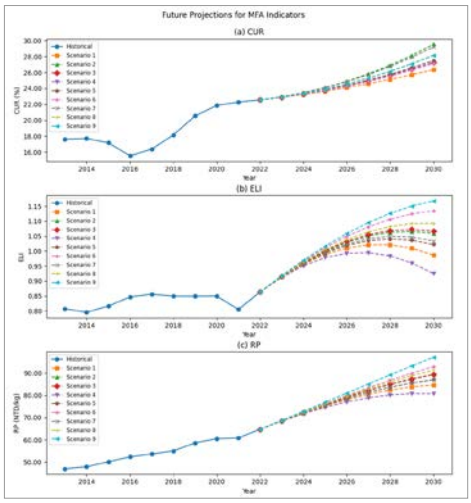


Workflow of Multimodal GPT in Circular Economy Modeling and Simulation.
Explanation: This step-by-step workflow chart illustrates how multimodal GPT may enhance Material Flow Analysis (MFA) and System Dynamics (SD) by recognizing and interpreting system model diagrams, facilitating accurate model construction and enabling the set-up of dynamic simulations of Taiwan's circular economy scenarios.

As the consumption of global resources mounts and human pressures on the environmental intensify, [1] the problem of balancing economic growth with sustainability [2] has become a shared challenge for governments, industries, and academia. The "circular economy" model is widely touted as a promising solution, yet identifying optimal strategies amid complex policies, industrial data, and resource flows in diverse contexts remains a formidable task.

A cross-disciplinary research team at National Taiwan University (NTU) has made a significant breakthrough by applying multimodal Generative Pre-trained Transformer (GPT) models to the analysis of circular economy transformation. Their study, *Application and Scenario Simulation of Multimodal GPT in Circular Economy Transformation: A Case Study of Taiwan's Material Flow Data*, was recently published in the prestigious journal *Resources, Conservation & Recycling*.

Working with Taiwan's available material flow data and policies from 2013 to 2022, the team integrated Material Flow Analysis (MFA) and System Dynamics



Sample Scenario Simulation Output.
Explanation: Line graphs of a GPT-assisted scenario simulation (Scenario 9: Population Stabilization and Resource Efficiency), showing projected increases in Taiwan's circular material use rate and resource productivity.

(SD) models with GPT's multimodal capabilities—interpreting text, data, and images—to set up a policy scenario simulation framework. In this way, they devised an end-to-end process, involving scenario design, data computation, and visualization of results that will enable official policymakers, industry stakeholders, as well as the general public to understand the long-term impacts of policy changes.

In Scenario 9 (Population Stabilization and Resource Efficiency), the simulations project that Taiwan's circular material use rate will increase from 22% in 2022 to 29% by 2030, while resource productivity will rise from NT$65 to NT$88 per kilogram. These predicted gains indicate both more efficient use of materials and also greater economic value created per unit of resource—confirming the dual environmental and economic benefits of well-designed policy interventions.

This research further underscores how AI can serve as a powerful strategic tool for sustainability—reducing barriers to cross-disciplinary collaboration and making policy planning more scientific and transparent. The team plans to extend the application of multimodal GPT to such areas as climate change, waste management, and circular industry policy development. They welcome collaborations with academic, industrial, and policy partners worldwide to co-create innovative approaches toward a realizing more sustainable and environmentally-friendly future.

Click or Scan the QR code to read the full article published in *Resources, Conservation & Recycling.*

[1] Human activities place pressure on the environment through habitat destruction (deforestation, urbanization), pollution (air, water, soil, and plastic), and the over-exploitation of resources (overharvesting, overfishing).

[2] Both resource sustainability and environmental sustainability.

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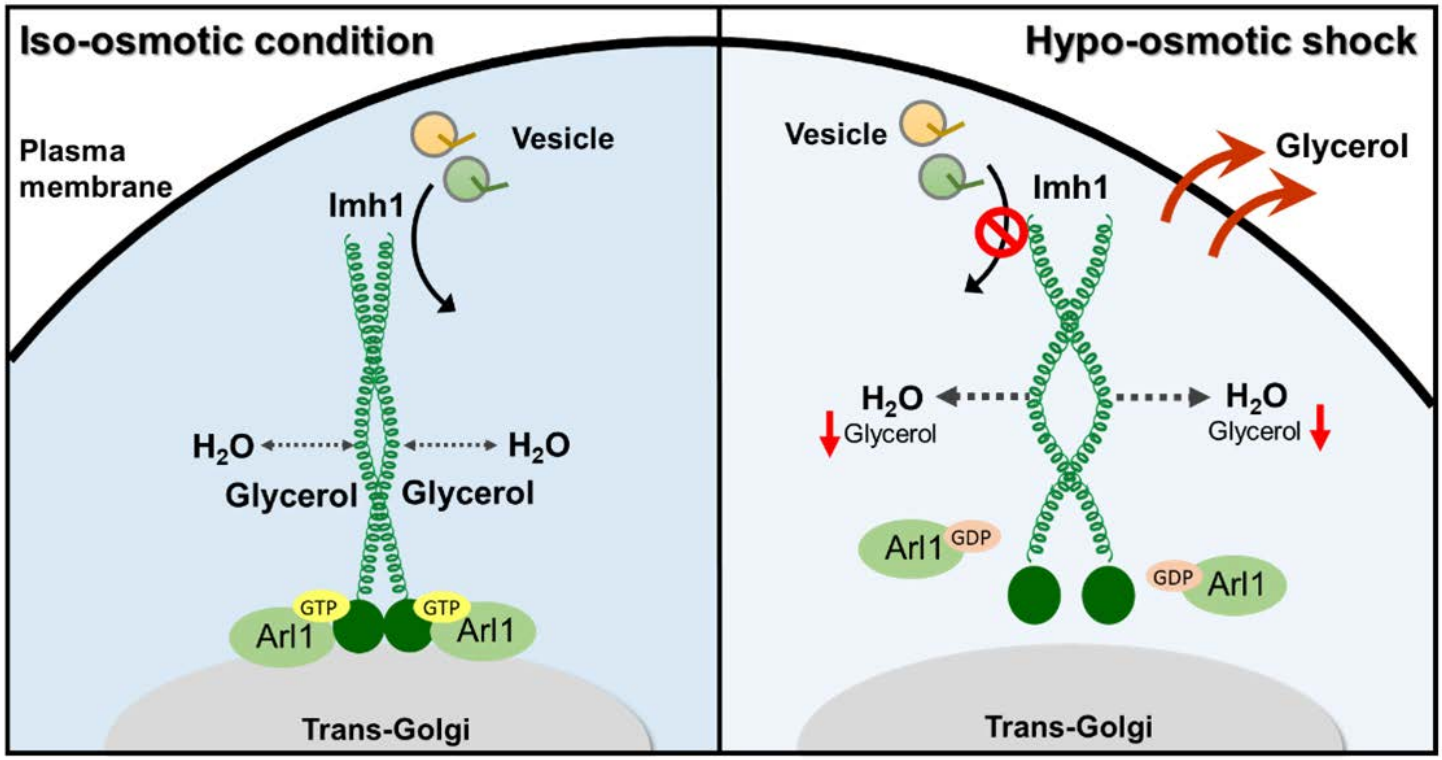
ACHIEVEMENTS

A Novel Discovery in the Regulation of Cellular Metabolism and Vesicle Transport



Imh1 is a Golgin protein that regulates vesicle trafficking at the trans-Golgi. This diagram illustrates how glycerol controls Imh1 localization and function. Under iso-osmotic conditions, a proper glycerol level helps maintain Imh1 Golgi localization by fine-tuning the conformation of the coiled-coil region, which in turn stabilizes Arl1–Imh1 Golgi localization. However, under hypo-osmotic shock conditions, glycerol leakage leads to the loss of Imh1 conformation and mislocalization from the Golgi, resulting in Arl1 dissociation from the Golgi.

Intracellular organelles, bounded by biological membranes, reply on vesicle transport for nutrient exchange, signal transmission, material recycling, and waste processing—functions analogous to the circulatory system in the human body. Nearly a hundred genetic disorders, autoimmune diseases, and cancers have been linked to disruptions in vesicle transport.

A research team led by Prof. Fang-Jen Lee has demonstrated that intracellular glycerol regulates the localization and function of the Golgi structural protein Imh1, clarifying a molecular link between metabolism and vesicle transport. This significant research finding has been published in the prestigious international journal *Nature Structural & Molecular Biology*.

The Golgi apparatus is a central organelle in eukaryotic cells responsible for protein modification and vesicle trafficking; its integrity is essential for accurate cargo delivery to target organelles. Golgi transport defects can cause neurological decline, developmental disorders, autoimmune conditions, and cancer. Prof. Lee's research group has focused on the molecular mechanisms governing Golgi vesicle transport; although prior research had found that Imh1 supports Golgi structure and transport, the precise regulation mechanism remained unresolved.

This research was the first to discover that when cells encounter hypotonic shock and intracellular glycerol levels decrease, the localization of Imh1 and the integrity of the Golgi apparatus are disrupted. Furthermore, the research confirmed that metabolic perturbations that reduce glycerol levels prevent correct Imh1 targeting to the Golgi, resulting in transport dysfunction. To uncover the molecular basis of this regulation, Prof. Lee collaborated with Prof. Chia-Jung Yu's proteomics group at Chang Gung University. They used isotope-labeled cross-linkers and cross-linking mass spectrometry (XL-MS) to quantify changes at lysine cross-linking sites, demonstrating that it is glycerol that alters Imh1's conformation. Importantly, the regulatory mechanism operates in both yeast and mammalian cells, indicating evolutionary conservation.

Because glycerol is a central metabolic intermediate, these results reveal a previously underappreciated connection between intracellular metabolism and vesicle transport pathways, highlighting how metabolic state influences intracellular trafficking. "Intracellular glycerol levels might be associated with various vesicle transport diseases, making the exploration of its mechanisms potentially valuable for discovering new therapeutic strategies with clinical applications," remarked Prof. Fang-Jen S. Lee.

Click or Scan the QR code to Access the Full Journal Article published in *Nature Structural & Molecular Biology*.

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TEACHING & LEARNING

Max Planck–IAS–NTU Center Inaugurated in Taiwan

Uniting Researchers from Germany, Taiwan, and the US to Trace the Origin of the Universe

Taipei — On September 1, 2025, the Max Planck Society (MPG), the Institute for Advanced Study (IAS), and National Taiwan University (NTU) jointly inaugurated the Max Planck–IAS–NTU Center for Particle Physics, Cosmology, and Geometry. The inauguration ceremony was held at NTU's Leung Center for Cosmology and Particle Astrophysics (LeCosPA), commencing a new era of international collaboration at the frontiers of fundamental physics.

A new milestone for science and NTU: The Max Planck–IAS–NTU Center officially launched at NTU on September 1, 2025. © Tsu-Ying Chiang

Distinguished guests in attendance included Wen-Chang Chen, President of NTU; Claudia Felser, Vice President of the Max Planck Society; and Chee-Chun Leung, President of Quanta Computer. A highlight of the event was the ceremonial exchange of the cooperation agreement, signed by Claudia Felser and Wen-Chang Chen, with Matias Zaldarriaga (Richard Black Professor, IAS) representing the IAS.

Particle physics seeks to uncover the smallest building blocks of matter—probing scales smaller than protons and neutrons—while cosmology investigates the vast structure and evolution of the Universe itself. “The new Center brings together expertise in particle physics, cosmology, and mathematics, with the ambition to create a unifying framework for understanding the Universe across all scales,” declared Daniel Baumann, Co-Director of the Center and Director of LeCosPA at NTU.

NTU President Wen-Chang Chen reaffirmed NTU’s global research vision: “We are proud to see NTU play a central role in this endeavor, and we look forward to the discoveries and innovations that will emerge from this community of excellence.”

The Center is co-directed by Johannes Henn (Max Planck Institute for Physics), Nima Arkani-Hamed (IAS), and Daniel Baumann (NTU), with deputy co-directors Bernd Sturmfels (Max Planck Institute for Mathematics in the Sciences), Matias Zaldarriaga (IAS), and Yu-Tin Huang (NTU). Center operations began earlier this year, supported by an initial five-year funding plan. In Taiwan, funding is provided by the National Science and Technology Council (NSTC) and the Ministry of Education (MoE).

After signing the agreement for the Max Planck–IAS–NTU Center (from left): Yu-Tin Huang (NTU, Deputy Co-Director), Daniel Baumann (NTU, Co-Director), Wen-Chang Chen (President, NTU), Claudia Felser (Vice President, MPG), Johannes Henn (MPP, Co-Director), and Matias Zaldarriaga (IAS, Deputy Co-Director).
© Tsu-Ying Chiang

About the Partner Institutions

The Max Planck Society (MPG) is Germany’s premier institution for basic research. Established in 1948 as the successor to the Kaiser Wilhelm Society, the MPG has counted 31 Nobel laureates among its members. Its Max Planck Institute for Physics (MPP) specializes in particle physics and currently comprises seven research departments.

The Institute for Advanced Study (IAS) in Princeton is one of the world’s leading centers for theoretical research. Founded in 1930, it has been home to some of the greatest scientific minds in modern history, including Albert Einstein and J. Robert Oppenheimer.

National Taiwan University (NTU) is Taiwan’s leading research university. Its Department of Physics hosts world-class research groups in theoretical particle physics and cosmology. The new Center is based at NTU’s Leung Center for Cosmology and Particle Astrophysics (LeCosPA), established through the generous support of Chee-Chun Leung, President of Quanta Computer.

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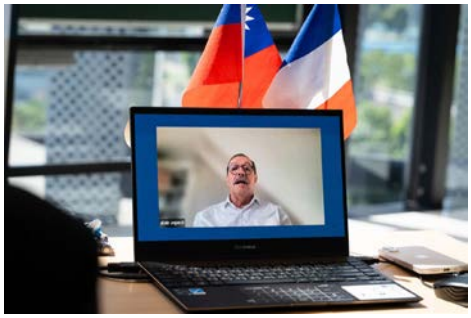
TEACHING & LEARNING

NTU Partners with Paris-Saclay and Grenoble Alpes to Drive Quantum Innovation

Representatives from the three universities signing the partnership agreement at NTU.

Taipei, October 13, 2025 — National Taiwan University (NTU) has joined ranks with Université Paris-Saclay and Université Grenoble Alpes to launch the France–Taiwan Quantum Center: Alain Aspect Program, a landmark initiative that will strengthen academic collaboration between Taiwan and France and catalyze research and talent development in quantum science and technology. The signing ceremony, held at NTU, was attended by representatives from the French National Centre for Scientific Research (CNRS) and the Bureau Français de Taipei (BFT), who bore witness to the formal establishment of this new partnership.



Prof. Alain Aspect delivering a congratulatory address via pre-recorded video.

Named in honor of Professor Alain Aspect, laureate of the 2022 Nobel Prize in Physics, the new center is aimed to deepen bilateral research cooperation and nurture a new generation of quantum scientists and engineers, instilled with global vision as well as technical expertise.

NTU President Wen-Chang Chen lauded the creation of the France–Taiwan Quantum Center as a significant milestone in the university's international collaborations. "This program represents a vital bridge between Taiwan and France—linking academic excellence with industry innovation to drive frontier research in quantum technology," he declared. Chen expressed his sincere gratitude to Mr. Raymond Soong, founder of Lite-On Technology, for his generous support in establishing the center as well as for his long-standing commitment to advancing NTU's research and global partnerships.

Participants at the signing ceremony. (Group photo.)

In a pre-recorded video address, Professor Alain Aspect expressed his delight at seeing the program he helped conceptualize come to fruition. "It is a great honor to have this initiative bear my name," he said, adding that his greatest hope is that the program will promote deeper exchanges between students and researchers at the three partner universities and across the broader scientific communities of France and Taiwan.

1. The France–Taiwan Quantum Center: Alain Aspect Program will administer a series of collaborative initiatives, including:
2. Academic and Internship Exchanges — fostering the mobility of young quantum researchers between France and Taiwan.
3. Doctoral Fellowships — supporting the next generation of quantum scientists.
4. Joint Academic Events — hosting conferences, workshops, and symposia.
5. Collaborative Research Proposals and Seed Funding — driving high-impact joint research and innovation.
6. Innovation and Entrepreneurship Partnerships — strengthening collaboration between academia and the quantum innovation ecosystem.

Through these initiatives, the France–Taiwan Quantum Center aims to cultivate a dynamic, reciprocal, forward-looking research community—one that will nurture and empower future quantum leaders and contribute to making global advances in quantum science and technology.

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TEACHING & LEARNING

Taiwan–Thailand Semiconductor Leaders Meet at NTU

At the opening ceremony, NTU Associate Vice President for International Affairs Prof. Kuo-Hsin Yang, Representative Mr. Narong Boonsatheanwong from the Thailand Trade and Economic Office, Prof. Supachai Pathumnakul from Thailand's MHESI, NTU EECS Associate Dean Prof. Jian Jang Huang, and Prof. Sa-ngiamsak from Khon Kaen University delivered remarks, encouraging participants to make the most of the program and deepen Taiwan–Thailand research collaboration.

Co-organized by the NTU Office of International Affairs and the College of Electrical Engineering and Computer Science (EECS), with support from the Thailand Trade and Economic Office (Taipei) and Thailand's Ministry of Higher Education, Science, Research, and Innovation (MHESI), this 10-day intensive program brings distinguished professors from leading Thai universities to NTU for advanced academic training.

Industry visit at the Taiwan Semiconductor Research Institute.

The program features lectures by leading faculty members from NTU's College of EECS and the Department of Political Science, covering semiconductors, artificial intelligence, quantum technologies, and in-depth analyses of industrial development and geopolitical dynamics. Participants also visited NTU's Maker Space, Electronics Circuits Laboratory, Delta–NTU Joint Research & Development Center, TSMC–NTU Joint Research Center, and Digital Circuits and Systems Laboratory, and engaged in hands-on chip fabrication at the NTU Nano-Electro-Mechanical Systems Center—showcasing NTU's strengths in frontier research and experiential teaching.

Beyond the classroom, the program offers a rich combination of industry exposure and cultural exploration:

- Industry Visits: Taiwan Semiconductor Research Institute, HSPM Discovery Center, and TSMC Innovation Museum, providing an inside look at Taiwan's cutting-edge semiconductor innovation ecosystem.
- Cultural Exploration: Guided tours of Dadaocheng and Yilan, introducing participants to Taiwan's cultural heritage and historical landscape.

At the opening ceremony, remarks were delivered by NTU Associate Vice President for International Affairs Prof. Kuo-Hsin Yang, Executive Director Mr. Narong Boonsatheanwong of the Thailand Trade and Economic Office (Taipei), Prof. Supachai Pathumnakul of MHESI Thailand, NTU EECS Associate Dean Prof. Jian Jang Huang, and Project Owner Prof. Sa-ngiamsak from Khon Kaen University. All speakers encouraged participants to fully engage with NTU's faculty and facilities and to deepen Taiwan–Thailand academic and research collaboration.

NTU looks forward to seeing participants become key drivers of future technological exchange and enduring cooperation between Taiwan and Thailand.

Group photo after putting on cleanroom suits.

Inside the cleanroom during the guided visit.

Visit to the TSMC Innovation Museum.

NTU EECS Associate Dean Prof. Jian Jang Huang (right) presents the certificate of completion to Prof. Sa-ngiamsak of Khon Kaen University (left).

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TEACHING & LEARNING

Building Global Pathways for Semiconductor Innovation

Participants attending intensive lectures and workshops at NTU.

Taipei, Summer 2025 — National Taiwan University (NTU)'s International College, in collaboration with the Ministry of Foreign Affairs (MOFA) and the Taiwan Semiconductor Research Institute (TSRI), has launched the 2025 Taiwan–Europe Semiconductor Short-term Training Program: Design Trends and Technological Transformations in Semiconductor. The initiative is aimed to deepen European students' understanding of Taiwan's world-leading semiconductor industry, introduce NTU's academic strengths, and foster long-term cooperation in research, technology, and talent cultivation between Taiwan and Europe.

Deputy Director-General Chu-En Lin of MOFA's European Affairs Department attending the opening ceremony of the 2025 Taiwan–Europe Semiconductor Short-term Training Program.

The program attracted outstanding students from top universities in Poland, Italy, Slovakia, Romania, Lithuania, and the Czech Republic. During the first week, participants underwent intensive training at NTU, attending courses on cutting-edge semiconductor design technologies taught by distinguished faculty. The students also visited NTU's cleanroom facilities for hands-on practice—combining

theory and application in a uniquely immersive learning experience.

Following their coursework at NTU, the students continued their research and practical training at TSRI, gaining fresh insight into the operational dynamics of Taiwan's semiconductor ecosystem. Beyond the classroom, the International College arranged cultural immersion activities-- campus tours, visits to NTU's Museum Complex, and an excursion to the National Palace Museum-- through which the participants experienced Taiwan's cultural richness and NTU's vibrant academic environment.

Deputy Director-General Chu-En Lin of the European Affairs Department, Ministry of Foreign Affairs, attended the program's opening ceremony and commended NTU's bold efforts in advancing academic-industry collaboration and promoting global talent exchanges.

This initiative underscores NTU's commitment to expanding international scientific cooperation and highlighting Taiwan's role as a key player in the global semiconductor ecosystem—both as a hub of innovation and as a leader in nurturing future talent. Building on this success, NTU's International College will continue to develop and expand academic partnerships with European institutions, setting new milestones in semiconductor research and education.

Click or Scan the QR code to visit NTU International College Official Website.

Students visiting a cleanroom and getting hands-on semiconductor practice.

Students touring NTU's camp as part of their cultural immersion program.

MOFA representatives celebrating the completion of the training program at the closing ceremony.

The Taiwan-Europe Semiconductor Short-term Training Program

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TEACHING & LEARNING

Where Science Meets the Sea: NTU's Ocean Program Builds Global Awareness

Participants tour exhibition galleries at the National Museum of Marine Science and Technology.

With generous support from the Ocean Affairs Council, National Taiwan University's (NTU) International College and the National Museum of Marine Science and Technology (NMMST) jointly hosted a two-day immersive program, "*Connecting Through the Ocean: Science × Culture × Community.*" This event, designed and coordinated by NTU's International Master's Program in Biodiversity (IMPB), drew nearly 70 participants from over 25 countries, underscoring Taiwan's growing appeal as a hub for global learning and cross-cultural exchange.

NTU International College, the International Master's Program in Biodiversity, the National Museum of Marine Science and Technology, and the Ocean Affairs Council jointly host the "Exploring Taiwan's Marine Ecology and Culture with International Youth" program.

The program commenced at the National Museum of Marine Science and Technology, where Director Ming-Yuan Wang introduced the museum's unique setting—nestled between mountain and sea—and explained how regional characteristics are integrated into professional marine science education. The participants toured exhibits on Taiwan's coastal ecosystems, marine industries, and cultural heritage, laying the foundation for hands-on learning. Then, through

such workshops as "*Seaweed Diversity and Applications*" and "*Coral Observation*" students were guided through citizen science practices, including field sampling, eco-material reuse, and the making of agar jelly and seaweed-inspired keychains—practices linking research with community-based marine conservation activities.

On the second day, the students visited a local fishing village, to learn directly from fishermen about ecological practices, traditional knowledge, and the realities of marine livelihoods. The group discussed how climate change affects ocean resources and fisheries and explored the Regional Discovery Center to gain a better understanding of the historical evolution of Taiwan's fishing industry and the diverse social roles within fishing communities. Researchers also shared their fieldwork experiences, encouraging students to connect marine science with personal reflection, creativity, and values-driven action.

The program concluded with a reflection session, where participants engaged in intercultural discussions and exchanged insights on tackling several persistent global challenges, such as climate change, sustainable fisheries, and coastal community resilience.

Professor Chia-Ying Ko, Director of the International Master's Program in Biodiversity, urged students to embrace and advance the spirit of the program. "Let this ocean experience remind you to see marine science from multiple perspectives, to build international bridges, and to pursue innovative, interdisciplinary solutions for our shared ocean future," she remarked.

This initiative exemplifies NTU's and NMMST's shared commitment to nurturing future leaders capable of advancing ocean sustainability through the integration of science, culture, and community.

Prof. Chia-Ying Ko, Director of the IMPB, presenting a token of appreciation to the NMMST co-organizers and discussing future collaboration opportunities.

Associate Dean of NTU's International College, Professor Kuo-Hsin Yang, leading a team of IMPB faculty to meet with NMMST representatives for further partnership planning.

Students learn about seaweed diversity and create seaweed-themed keychains as keepsakes.

Participants conducting coral observation fieldwork at Chaojing Park.

Students engaging with researchers in open discussion, considering new ways to connect local knowledge and scientific thinking.

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NTU Announces New Round of Top 100 Contributions

Participants of the announcement event.

National Taiwan University (NTU) unveiled the second cohort of its Top 100 Contributions on November 7, highlighting 15 landmark achievements that reflect the university's far-reaching influence on Taiwan and the world. Building on the 24 contributions announced last year, NTU President Wen-Chang Chen, joined by deans from multiple colleges, introduced this year's selections—each representing a transformative milestone in scholarship, public service, and societal advancement.

Deans of the NTU's Colleges with contributions selected.

This year's honorees span a remarkable breadth of fields, including Indigenous knowledge and cultural partnership; the creation and advancement of Taiwan's National Health Insurance system; modernization of the nation's animal science and livestock industries; biodiversity protection and conservation governance; biotechnology development from early fermentation sciences to today's innovation hubs; and pioneering work in chemical engineering and powder technology.

They also include NTU's long-standing leadership in disaster prevention science and resilience building; breakthroughs in active tectonics and seismic geology with global impact; innovations in infection control that shaped Taiwan's public health response; and medical research that established Helicobacter pylori eradication as a strategy for gastric cancer prevention.

Other contributions recognized include the world's first Chinese speech recognition system; foundational advances in variational electromagnetism; influential research on Taiwan's democratic development and broader Asian democratization; groundbreaking scholarship establishing Taiwan-centered social sciences and humanities; and seminal achievements in natural products chemistry and organic chemistry education.

President Chen emphasized that the Top 100 Contributions project embodies former NTU President Fu Ssu-nien's belief that NTU must "dedicate this university to the universe." These contributions, he said, represent nearly a century of dedication by NTU faculty, students, and alumni whose work has shaped the institution's legacy of excellence. Looking forward, President Chen urged the university community to "innovate with purpose and amplify NTU's impact on the world."

The event also featured the premiere of a special documentary project: a series of in-depth interviews with NTU's four living presidential alumni—former Presidents Chen Shui-bian, Ma Ying-jeou, and Tsai Ing-wen, as well as current President Lai Ching-te. Each reflected on formative years at NTU, shared insights on higher education policy, and offered heartfelt messages for current students and the university's future.

President Chen concluded by inviting the entire NTU community to participate in preparations for the university's upcoming centennial celebrations. He highlighted that NTU's 100th anniversary is not only a time for remembrance but also a call to action—an opportunity to reaffirm NTU's mission to educate future leaders, advance knowledge, and serve society.

Programs proposed under the centennial initiative aim at uniting the NTU community in preparation for the 100th anniversary celebrations.

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From Advocacy to Action: NTU Leads Taiwan's Equity Effort in Higher Education

Session on "Practices of Ethnic Equity in Universities at Home and Abroad" — side view.

The Indigenous Students Resource Center (ISRC) at National Taiwan University (NTU) hosted the first Ethnic Equity in Higher Education Forum, convening over a hundred faculty members, students, administrators, and legislators to further dialogue on Indigenous inclusion in higher education. The forum marks a significant milestone in NTU's Five-Year Ethnic Equity Plan and affirms the university's growing leadership in building a campus culture grounded in Indigenous perspectives, equity, and respect.

The forum participants (Group photo)

Building on the momentum of the 2023 students' anti-discrimination movement, the forum transformed their grassroots advocacy into meaningful institutional action. NTU Secretary-General Da-Ming Wang underscored the role of the Indigenous and Ethnic Equity Working Group as a key governance platform for mainstreaming Indigenous and ethnic knowledge—an effort that is aligned with the Ministry of Education's "Indigenous Education for All" initiative. Vice

President for Student Affairs Shi-Wei Chu affirmed this commitment, stressing NTU's responsibility to ensure that equity is reflected not only in policy but in everyday academic and campus life.

Legislator Saidhai Tahovecahe of the Rukai people urged Taiwan's higher education institutions to fully integrate Indigenous perspectives into national policy frameworks. Scholars and practitioners further reinforced that call for structural reform. Prof. Chun-Hung Chen of Soochow University spotlighted the need to recognize Indigenous knowledge sovereignty through institutional redesign. Drawing on experiences from New Zealand and North America, Profs. Bavaragh Dagalomai (Jolan Hsieh) and Yi-Tze Lee of National Dong Hwa University emphasized the need for cultural immersion, community partnership, and the need to address systemic inequality and historical trauma.

Members of the Indigenous Student Anti-Discrimination Action Group shared their firsthand experiences and reflections and offered recommendations for the path forward. Their proposals included formal Indigenous representation in university decision-making, the establishment of a Committee on Indigenous Discrimination, comprehensive campus-wide cultural sensitivity training, and the creation of an NTU Land Acknowledgement Statement to honor Indigenous lands and heritage.

The forum is widely regarded as a significant milestone along NTU's equity journey—signaling a transformation from awareness to accountability. As Taiwan's leading university, NTU is called upon to fashion a model of higher education environment where Indigenous rights are recognized as fundamental human rights, and where Indigenous faculty, staff, and students are valued as essential contributors to the university's intellectual and cultural vitality.

The moderator presenting opening remarks -- "Addressing Discrimination in Higher Education"

Forum stretching session before the afternoon program.

Q&A Session on "University Responsibilities under the National Indigenous Education Policy."

Panel discussion on "Current Practices and Future Prospects for Ethnic Equity."

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When Postcards Told Stories: NTU Exhibition Bridges Taiwan's Past and Present

NTU Library hosts the exhibition "Moments of the Everyday and the Extraordinary: Taiwan in Postcards from the Japanese Era."

Taipei — The National Taiwan University (NTU) Library proudly presents the "*Moments of the Everyday and the Extraordinary: Taiwan in Postcards from the Japanese Era.*" This special exhibition brings early 20th-century life into vivid focus through the art of the Ehagaki (picture postcard).

Ehagaki postcard.

More than mere scenic souvenirs, Ehagaki served as a vital medium for sharing personal travel experiences and preserving fleeting moments in a tangible, enduring form. During the Japanese colonial period, postcards depicting Taiwan featured a remarkable range of imagery—from painted landscapes and mountain vistas to photographs of urban landmarks, emerging industries, social customs, and Indigenous cultures. Together, these artifacts capture the island's diverse human and natural landscapes during a pivotal era of transformation.

The NTU Library houses a significant collection of over 1,000 historic postcards. This assemblage was curated from multiple prestigious sources: the Library's Special Collections, private donations from local historians, image archives

contributed by Prof. Tsung-Liang Chien of the NTU College of Medicine, and the treasured personal collection of the late Dr. Po-Chun Chen, an esteemed NTU alumnus and former Section Chief at the Central Geological Survey under the Ministry of Economic Affairs. Through the generous consent and collaboration of Dr. Chen's family, the Library has digitized these materials, ensuring their long-term preservation and expanding the University's digital archive.

At the heart of the exhibition is the theme of everyday life—the rhythms, routines, and aspirations of the era. Through postcards and commemorative stamps depicting milestones such as the *1935 Taiwan Exposition in Commemoration of the 40th Year of Japanese Rule*, as well as urban leisure spaces and romantic excursions, visitors can glimpse how modernity, colonial administration, and local life intertwined.

By combining careful curation with advanced digital restoration, the NTU Library invites viewers to travel across time, experiencing the textures of both the everyday and the extraordinary. Each postcard, frozen in an instant of memory, serves as a portal to rediscover the layered complexity of Taiwan's past.

A view of the exhibition space at the NTU Library.

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NTU Celebrates 97 Years of Excellence and Global Leadership

National Taiwan University (NTU) marked its 97th anniversary on November 15 with a celebratory ceremony held at the NTU Sports Center. Presided over by President Wen-Chang Chen, the event welcomed former presidents, alumni from around the world, and distinguished guests. A highlight of the ceremony was the conferral of an honorary doctorate upon Mr. Raymond Soong, Founder of Lite-On Technology Corporation and Chairman of the Lite-On Group, in recognition of his exceptional achievements and longstanding contributions. The university also honored eight Outstanding Alumni and presented the Student Social Contribution Special Award.

NTU President Wen-Chang Chen delivers remarks at the University's 97th Anniversary Celebration.

This year's honorary doctorate recipient, Chairman Soong, is a pioneering figure in Taiwan's optoelectronics industry. He has led the development of core optoelectronic components and essential electronic technologies, propelling global innovation across the sector. Beyond industry leadership, he is deeply committed to sustainability, public service, and education—supporting institutions across

Taiwan and cultivating future talent. His career stands as a model of corporate leadership and social responsibility.

President Chen emphasized that NTU must embrace a renewed vision to meet the demands of a rapidly changing world—educating global citizens equipped with expertise, creativity, leadership, and a spirit of service. NTU's recent efforts to promote diverse, internationally oriented learning pathways—such as 280 interdisciplinary modules, college-level bachelor and honors programs, and the NTU Beyond Borders initiative—earned the university the THE Awards Asia prize for Outstanding Support for Students. NTU's "C³ Lab Future Talent Empowerment Program" was also shortlisted for the 2025 QS Reimagine Education Awards in the "Developing Emerging Skills & Competencies" category, demonstrating NTU's forward-looking approach to nurturing the next generation of leaders.

To strengthen its global partnerships, NTU has accelerated collaboration with Nobel laureates and world-leading scholars through the launch of the Taiwan Bridges Program and the establishment of the Taiwan Higher Education and Nobel Laureates Association. Recent milestones include the creation of the Max Planck–IAS–NTU Center with Germany's Max Planck Society and the Institute for Advanced Study at Princeton, as well as the France–Taiwan Quantum Science Center with Université Paris-Saclay and Université Grenoble Alpes. These initiatives underscore NTU's commitment to expanding its global research impact.

This year, NTU expanded the Student Social Devotion Special Award to honor four student recipients who exemplify social responsibility and reflect the university's founding motto, "Integrity, Diligence, Patriotism, and Philanthropy."

Representing the student awardees, Pharmacy major Hui-Chu Hou reflected on how witnessing disaster relief efforts in her rural hometown first inspired her commitment to serving communities. At NTU, she has been deeply engaged in public health and social service. "The essence of medicine and public health is understanding and connection," she shared, reaffirming her dedication to promoting health equity on clinical, societal, and global fronts.

Across campus, NTU departments and student organizations also hosted a wide array of celebratory activities—including student showcases, arts and cultural performances, and campus tours—welcoming alumni, faculty, staff, and guests to join in commemorating the university's 97 years of excellence.

NTU confers an Honorary Doctorate upon Mr. Raymond Soong, Founder and Chairman of Lite-On Technology Group (left). At right: NTU President Wen-Chang Chen.

Eight alumni were honored as NTU Outstanding Alumni this year. From left to right: Che-Sheng Su (EMBA, Finance), Ting-Wu Hu (Department of Political Science), Chien-Te Chen (Department of Physics), An-Chi Wang (Department of Chinese Literature), NTU President Wen-Chang Chen, Ju-Pin Yang (Department of Chinese Literature), Cheng-Wen Wu (College of Medicine), Min-Neng Kuo (Department of Civil Engineering), and Ying-Chao Lai (College of Law).

Four students received the "Student Social Devotion Special Award." From left to right: Chia-Heng Hsieh (Institute of Environmental and Occupational Health Sciences, College of Public Health), Yu-Han Li (Bachelor Program in Innovative Leadership, College of Innovation and Design), NTU President Wen-Chang Chen, Hui-Chu Hou (Department of Pharmacy, College of Medicine), and Mariana Gabrielle Cangco Reyes (International Degree Program in Climate Change and Sustainable Development, College of Science).

Click or Scan the QR code to visit the "NTU 97th Anniversary Celebration" webpage.