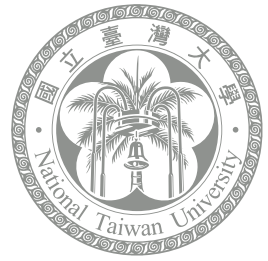


2025-2026



**National  
Taiwan University**

**in  
FOCUS**

**National  
Taiwan University**

**IN**

**FOCUS  
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**2025-  
2026**





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# FROM THE DESK OF PRESIDENT CHEN

As National Taiwan University (NTU) approaches its centennial in 2028, our vision remains steadfast: to establish a world-class institution that not only spearheads global excellence in research but also facilitates profound social progress. This issue of NTU Focus highlights how we are translating this vision into tangible achievements through the dedication of our faculty, students and international partners. They address global challenges, such as artificial intelligence (AI) and sustainability, lead international research projects and strengthen industry-academic cooperation, all while cultivating interdisciplinary talents with global perspectives.

Recent breakthroughs in high-stakes clinical care and sustainable technology showcase NTU's commitment to research excellence. From utilizing AI to detect pancreatic cancer early to developing regenerative hydrogels for brain repair, NTU continues to push the boundaries of medical science. Simultaneously, research in green materials, such as extending OLED lifespans and innovating anode-free batteries, underscores the University's dedication to carbon neutrality.

To cultivate future talents, NTU has embraced a learner-centered pedagogical model that empowers students to navigate a rapidly changing world. Breaking the boundaries of traditional classrooms and departments, we continue to develop new interdisciplinary programs that empower students to tackle prospective obstacles. The Future University initiative has moved from concept to reality, with students now designing their own interdisciplinary paths through university-wide degree programs. Beyond the classroom, NTU Beyond Borders has sent over 1,500 students worldwide this year, ensuring our graduates possess the necessary cross-cultural perspectives and "soft power" for leadership in the age of AI.

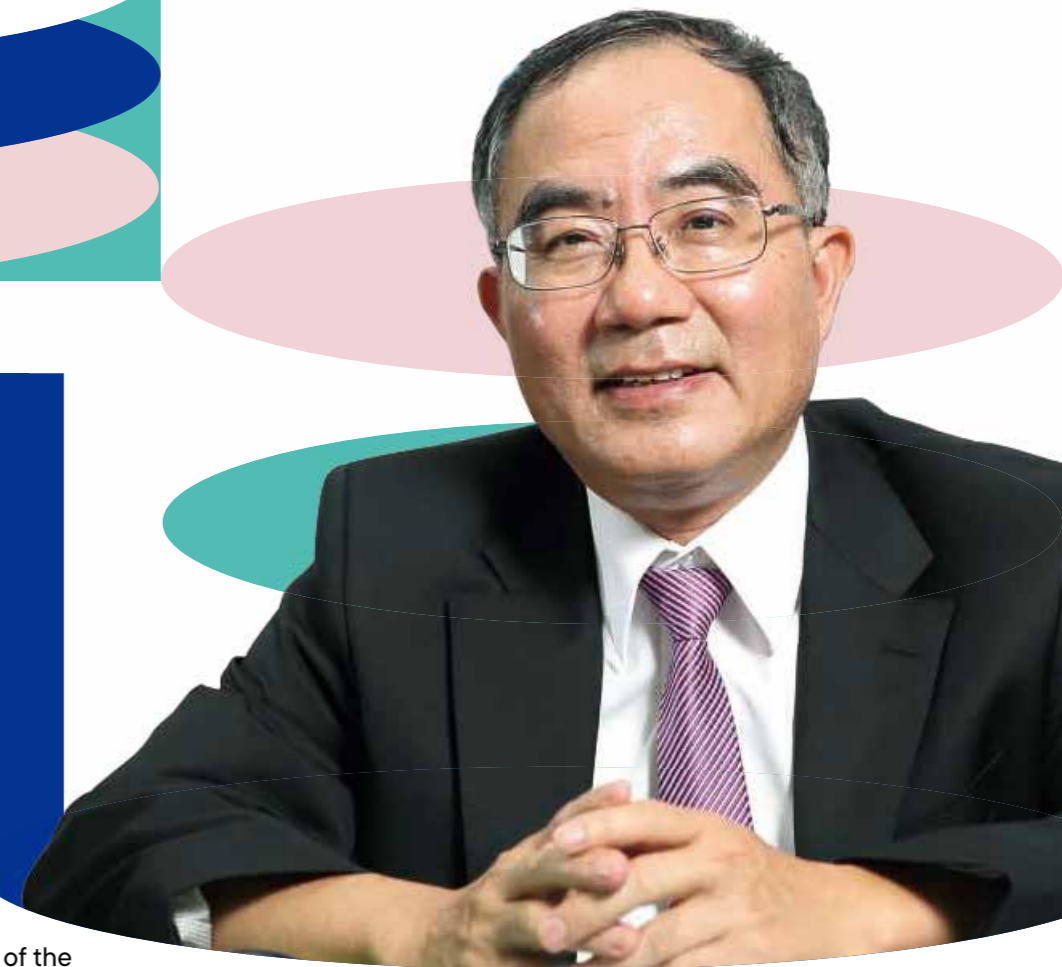
Complementing these academic innovations is our commitment to career development. The Career Center plays a vital role, linking students with industry leaders to ensure their skills align with industry demands. The International Mentorship Program matches students with over 300 summer internship opportunities across over 130 partner organizations, providing a critical bridge between NTU and global professional networks. These efforts have earned NTU international acclaim, including the LinkedIn Future Talent Partnership Award.

In addition, NTU is significantly expanding its international influence through strategic alliances. By establishing joint laboratories with world-renowned

institutions such as the Max Planck Society and the University of Tokyo, we are positioning Taiwan as a central hub for global scientific discourse. Our leadership in semiconductors and ties with regional partners have secured NTU as one of the prime architects of the technologies shaping the 21st century.

NTU continues to climb in global rankings, rising to 63rd on the 2026 QS World University Rankings and 14th on the 2025 Times High Education (THE) Impact Rankings. We continue to improve our academic reputation, internationalization and alumni employability, expanding our research influence globally and preparing our alumni to thrive. Our impressive THE Impact Ranking reflects our steadfast commitment to the United Nations Sustainable Development Goals and our social responsibility.

For our international partners and peer institutions, NTU is more than a university; it is a dynamic gateway to the Asia-Pacific research landscape and a committed ally in solving global challenges. We invite you to explore the collaborative milestones within these pages, which reflect our dedication to institutional transparency, academic freedom and



*Wen-Chang Chen*

**Wen-Chang Chen**  
**President**  
**National Taiwan University**

shared innovation. As we stand on the threshold of our second century, we remain committed to reinforcing our existing partnerships and forging new connections that will redefine the boundaries of global partnership and cooperation.

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## Base

- 34,000+ students
- 6,400+ faculty members
- 17 colleges
- 61 departments
- 154 graduate institutes
- 100+ research centers

## Employability

- THE Global Employability University Rankings 2026 : 77th
- QS World University Rankings by Employability 2026 : 11th
- No. of patents obtained : 4163
- No. of startups : 38

## Global NTU

- 7000+ international students from 96 countries, comprising 22% of all students
- 11% international faculty
- 750+ student abroad programs in 54 countries
- 100+ dual degree programs in 20 countries
- 1500+ students studying abroad

## USR & Reputation

- NTU manages approximately 1% of Taiwan's total land area.
- 25 NTU alumni are members of the US National Academy of Science.
- Alumni include the only Taiwanese recipient of the Nobel Prize, the only two Taiwanese recipients of the Wolf Prize and the only ethnically Chinese recipient of the Turing Award.



- THE Impact Rankings 2025 : 14th



- QS World University Rankings 2026 : 63rd
- QS Asia University Rankings 2026 : 23rd

DATA

## Top Research

- Ranks in top 1% of the world in 19 Essential Science Indicators
- 800+ highly cited papers
- Citation frequency rose by 170% in the last decade



# NTU AWARDS AND HONORS

QS World University Rankings 2026: Top global universities



NTU ranked 63rd on the 2026 QS World University Rankings overall, its best performance on record, showing improvement in academic reputation, internationalization and alumni employability.



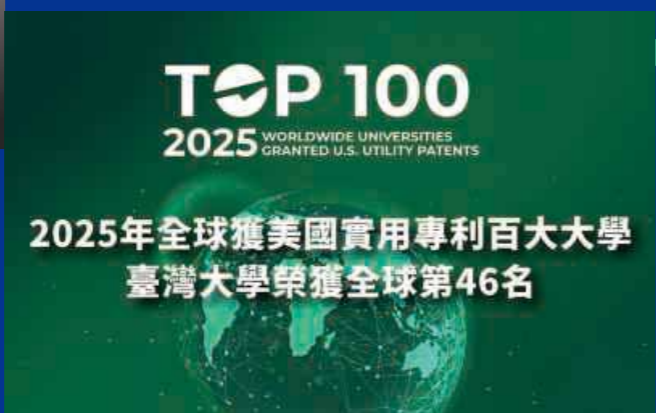
NTU ranked 14th on the 2025 Times High Education Impact Rankings, rising 41 places from the previous year and highlighting its outstanding performance in sustainable development and social responsibility.



2026年QS世界大學永續排名  
臺大榮獲全球第72名  
NTU Ranks 72nd Globally in  
QS World University Rankings: Sustainability 2026

亞洲 ASIA #4 臺灣 TAIWAN #1

NTU ranked 72nd in the 2026 QS World University Rankings for sustainability, the top among Taiwanese universities and fourth in Asia, acknowledging its efforts in environmental research, energy conservation and carbon reduction.



NTU secured 46th place in the US National Academy of Inventors' Top 100 Worldwide Universities Granted US Utility Patents in 2025 with 74 patents, showing the tangible impact of its research and development.



Professor Tzong-Lin Wu, the Dean of the College of Electrical Engineering and Computer Science, was elected as a fellow of the US National Academy of Inventors, the only academic in Taiwan to receive this honor in 2025.



The NTU Humanities Building, completed in 2024, received second place in the mid-rise buildings category at the 2025 Excellence in Concrete Construction Awards presented by the American Concrete Institute.

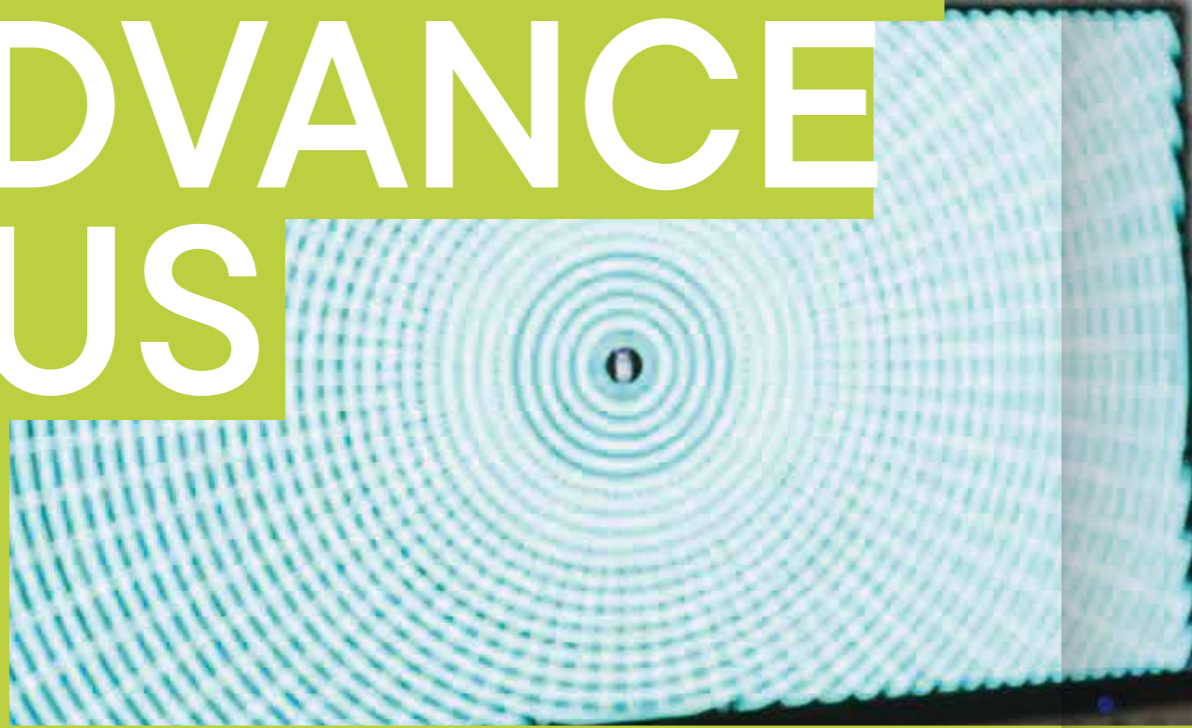


Professors Minn-Tsong Lin, Ying-Jer Kao and Cheng-Wei Chiang of the Department of Physics were elected as fellows of the American Physical Society in 2025, the first time that three professors in the department have received this honor in the same year.



A student team led by Professor Chun-Yi Lee claimed the championship at the 2025 Supercomputing Conference (SC25) Student Cluster Competition in the US, marking a major milestone for Taiwan in high-performance computing and AI.

# RESEARCH TO))) ADVANCE US



- Medical Advancement
- Engineering and Technology
- Natural Sciences
- Humanities and Social Sciences

# DEVELOPING INJECTABLE HYDROGELS TO HELP REPAIR THE BRAIN

Stroke and Parkinson's disease are major neurological disorders that limit the brain's regenerative ability. To address this challenge, a research team led by Professor Shan-Hui Hsu at the Institute of Polymer Science and Engineering and including a neurosurgeon and neurologist from National Taiwan University Hospital developed soft, biodegradable, self-healing hydrogels that can be injected directly into the brain. Acting as temporary scaffolds, these advanced functional hydrogels support tissue repair while releasing therapeutic molecules in a precisely controlled, stage-specific manner. This innovative

development was honored with the National Science and Technology Council Future Tech Award, recognizing its strong potential for next generation neuroregenerative medicine.

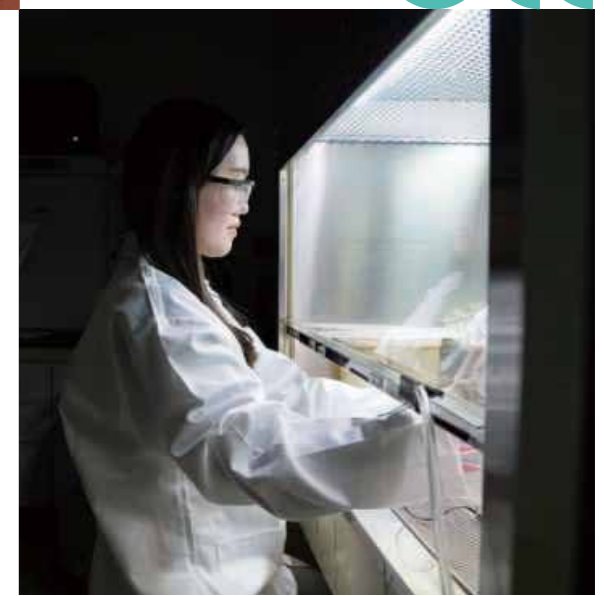
The team created an asynchronous drug-release platform, allowing different drugs to be released at different stages of recovery. The hydrogel can simultaneously carry anti-inflammatory agents and neuroregenerative drugs, mirroring the brain's natural healing sequence. This dual-drug system significantly improves behavioral recovery and promotes the growth of new neurons and blood vessels.

For Parkinson's disease, the team designed a triple-release hydrogel that delivers antioxidant, anti-inflammatory and neuroprotective factors in distinct modes, demonstrating its potential as a multi-dimensional therapy.

These innovations highlight a new generation of injectable, adaptive and bioactive hydrogels designed to meet the complex therapeutic needs of neurological diseases. This series of work demonstrates how biomaterials engineering can reshape brain repair strategies, moving beyond controlling symptoms toward truly regenerative, multi-stage treatment solutions.



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# DETECTING PANCREATIC CANCER EARLY WITH AI



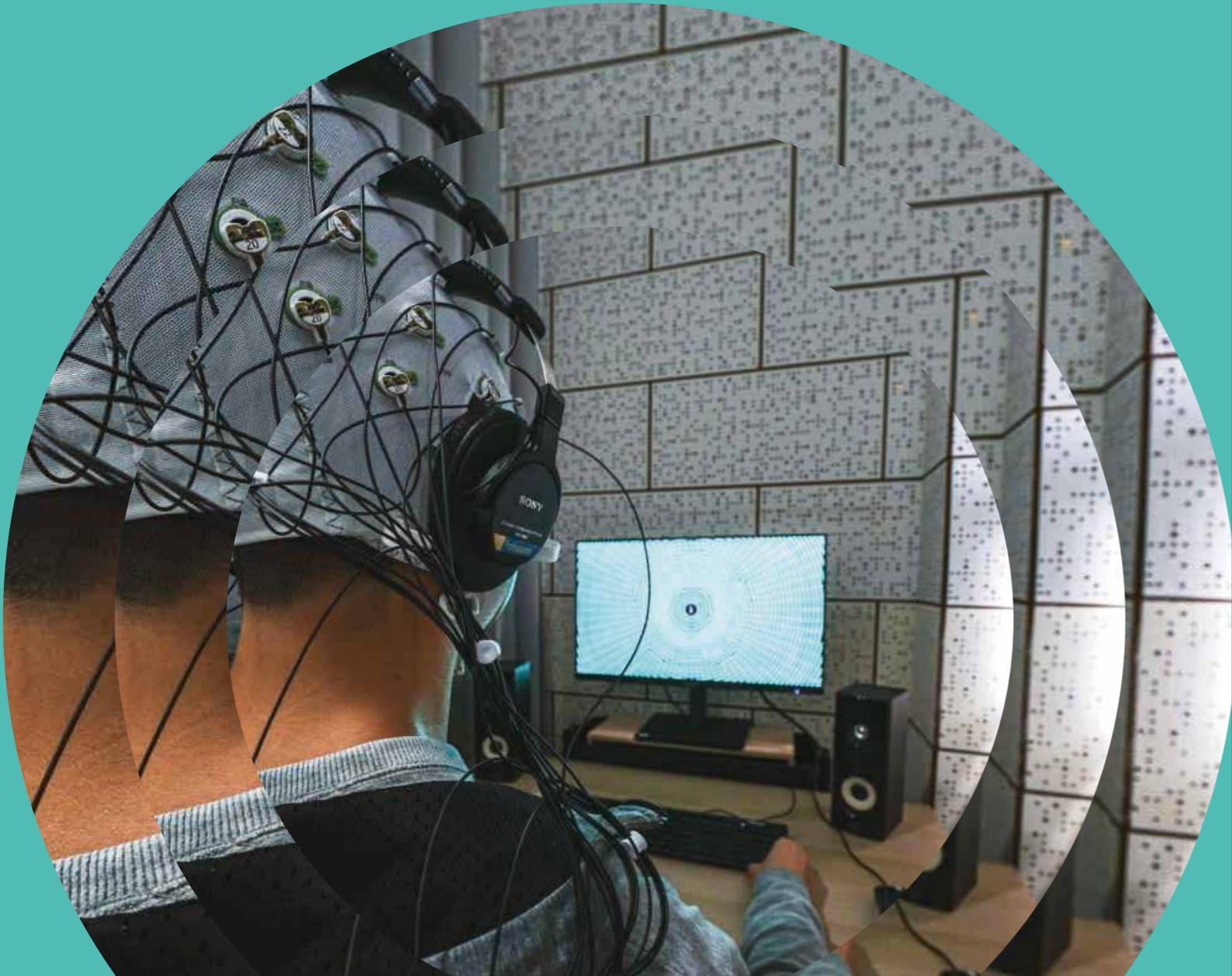
Professor Wei-Chih Liao's research focuses on AI-assisted image analysis and developing novel biomarkers and screening strategies to detect pancreatic cancer early. Pancreatic cancer (PC) ranks as the third and seventh most deadly cancer in the US and Taiwan, respectively. PC is rarely curable once the tumor grows beyond 2cm, which makes early detection especially important. However, about 40% of PC tumors smaller than 2cm are missed on computed

tomography (CT) scans, the main way to detect the cancer.

To help improve detection, Professor Liao's study group developed the first AI model capable of detecting and diagnosing PC on CT scans. In a landmark nationwide validation using real-world clinical data, the AI model reached 86% sensitivity for pancreatic cancers smaller than 2cm and detected half of the cancers not detected clinically. This

research won the Radiology Society of North America Alexander R. Margulis Award.

The research culminated in the development of the first computer-aided detection and diagnosis tool for PC — PANCREASaver. Underpinned by four US-patented technologies, PANCREASaver has been approved for clinical use in Taiwan and designated as a breakthrough device by the US Food and Drug Administration.



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Non-invasive 40Hz sensory stimulation is a promising therapeutic strategy for Alzheimer's disease. However, translating success from animal models to human clinical application is challenging due to the complexity of human neurodynamics. The Applied Cognition and Neuroscience Laboratory in the Department of Psychology, led by Professor Philip Tseng, focuses on bridging this gap by using real-time brainwave signals to test the parameters necessary for effective human neural synchronization.

Through a series of investigations, the team has delineated critical factors for efficacy. They demonstrated that single, short-duration stimulation fails to yield immediate cognitive benefits, confirming that therapeutic effects require cumulative, long-term dosage. In addressing long-

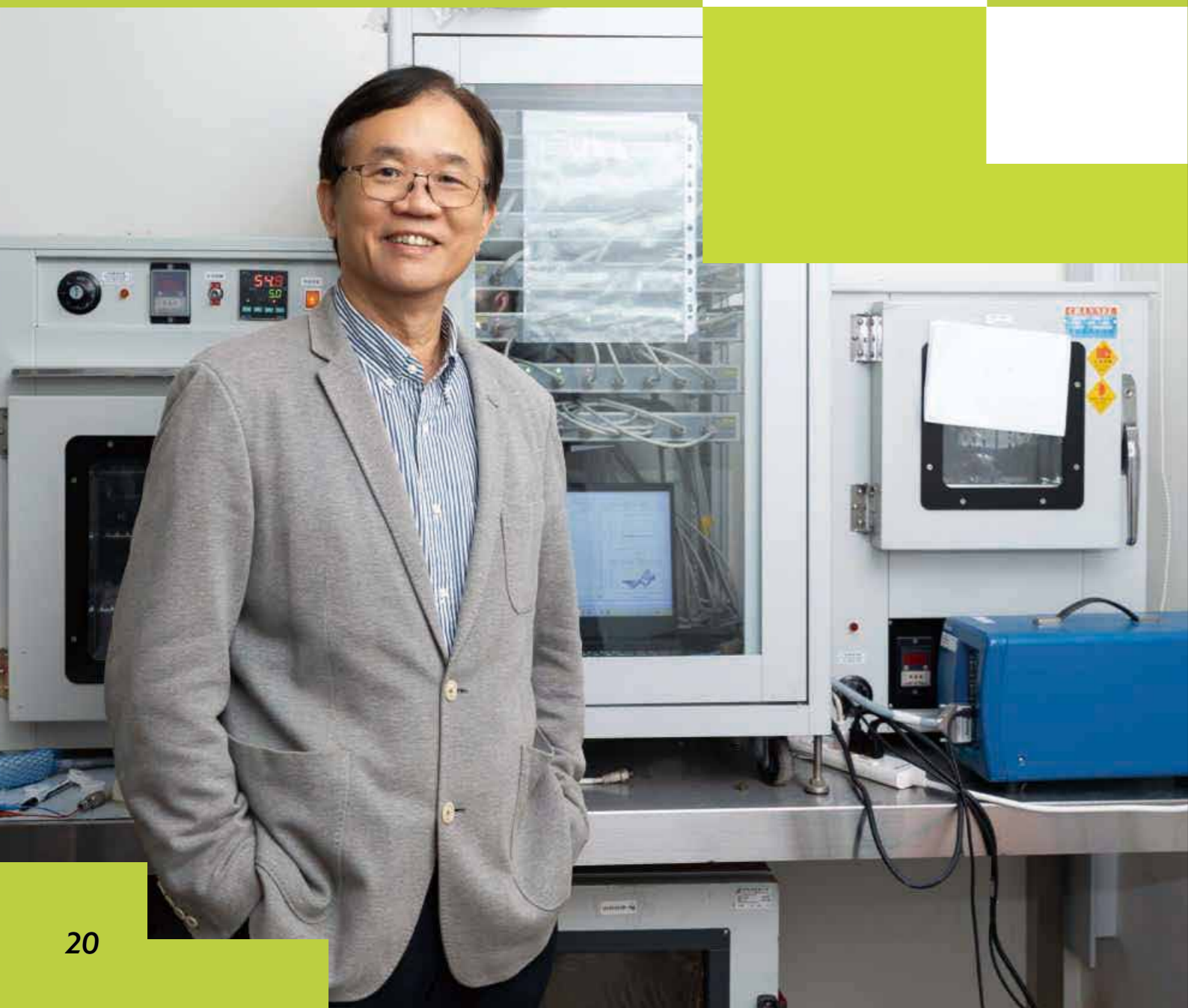
term adherence, they found that when calibrated for subjective comfort, auditory stimulation elicits significantly stronger gamma responses in the frontal cortex compared to visual stimuli. Furthermore, they identified that "internal distraction" enhances gamma synchronization via stochastic resonance, suggesting that passive engagement is more effective than forced concentration.

Expanding their scope beyond 40Hz, the team has also implemented theta burst entrainment via light and sound. This complex protocol can effectively treat major depression but was previously only available in expensive, magnetic stimulation devices that require clinical oversight. The team's ongoing work combines neuroscience, psychology and engineering to transform sensory stimulation from a theoretical novelty into a robust clinical intervention.

# NEXT-GENERATION SENSORY THERAPEUTICS FOR COGNITIVE AND MENTAL HEALTH



# MAKING SAFER, MORE POWERFUL LITHIUM-ION BATTERIES

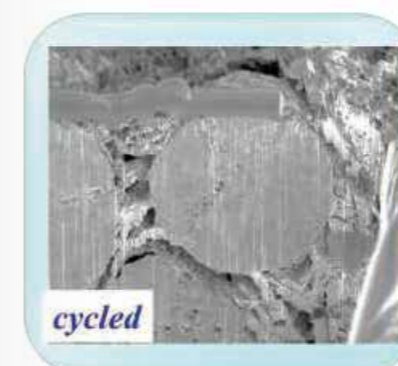


All-solid-state lithium-ion batteries (ASSLIBs) are a promising upgrade over conventional lithium-ion batteries. Unlike traditional batteries that use flammable liquid electrolytes, these batteries use solid electrolytes, which are much safer. They also allow for more flexible designs in the battery's electrodes, which can significantly increase the battery's energy capacity. One of the biggest challenges for ASSLIBs is keeping the solid electrolyte and the active electrode materials in high-proximity, stable contact. Current methods often rely on extremely high mechanical pressure, which makes these batteries less than practical for everyday usage.

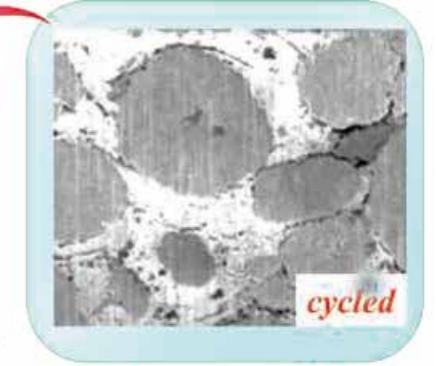
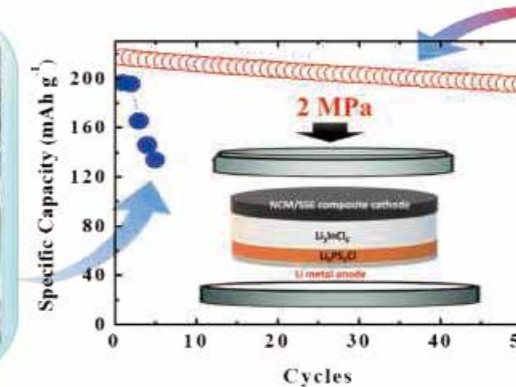
new type of free-standing composite cathode. These cathodes combine high-capacity nickel-rich materials ( $\text{LiNi}_x\text{Co}_y\text{Mn}_{1-x-y}\text{O}_2$ , or NCM) with a solid electrolyte called  $\text{Li}_3\text{InCl}_6$  (LIC). The key innovation is to utilize "in-situ recrystallization" (ISR) to formulate a well-integrated, strong interface between the materials that improves physical contact and reinforces chemical bonds. The result is a battery component that allows lithium ions to move efficiently while resisting separation, even under low pressure. This approach points to a new strategy for making ASSLIBs that are both powerful and practical, opening the door to more secure, durable batteries for real-world applications.

In their research, Professor Nae-Lih Wu's team in the Department of Chemical Engineering developed a

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Conventional process



In-situ recrystallization



# SELF-PRESSURIZING DESIGN BOOSTS BATTERY SAFETY AND CAPACITY



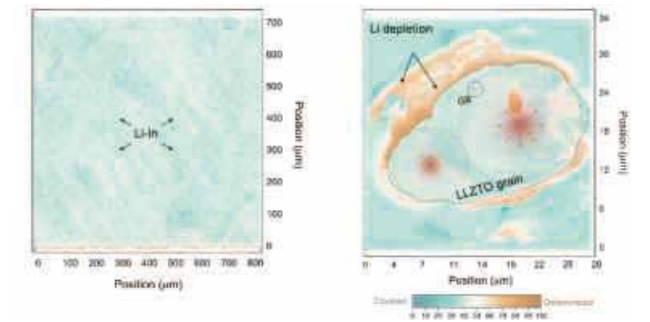
A promising way to improve batteries is to form lithium metal only during the first charge, making sure the lithium is high-quality for safe and efficient operation. This idea is called an anode-free battery, where the battery doesn't have a traditional lithium metal anode. Instead, it uses a solid-state electrolyte that enables ion transport. These "anode-free" all-solid-state lithium metal batteries (ASSLMBs) remove the flammable liquid found in conventional batteries, offering safety, affordability and efficiency.

However, these batteries face a major problem: the lithium metal interface can become unstable, causing the battery to lose capacity quickly, especially when no external pressure is applied. To tackle this, Professor Ru-Shi Liu's team at the Department of Chemistry studied lithium-stuffed garnet-type solid electrolytes (LLZO-Ta) for anode-free batteries. Their key innovation is a 500-nanometer-thick indium layer that helps control lithium-ion movement during charging. This thin layer ensures lithium deposits evenly in the battery during the first charge and improves lithium availability in later cycles. The layer also undergoes a crystal-phase transformation that expands in physical volume while maintaining lithium ion mobility. This internal "self-supporting" pressure stabilizes the lithium interface, removing the need for external pressure.

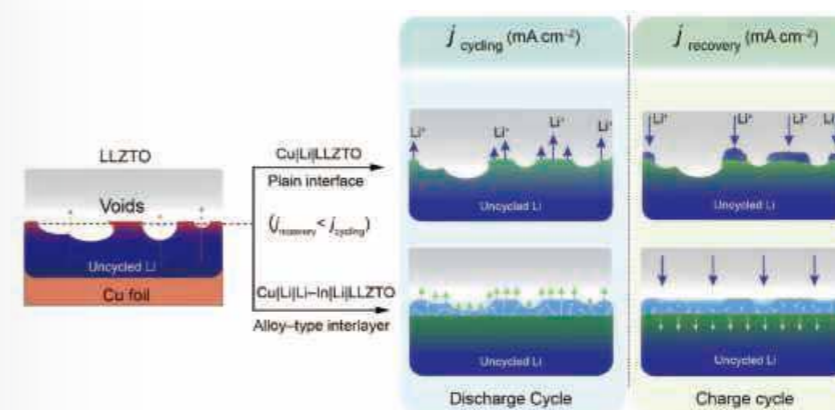
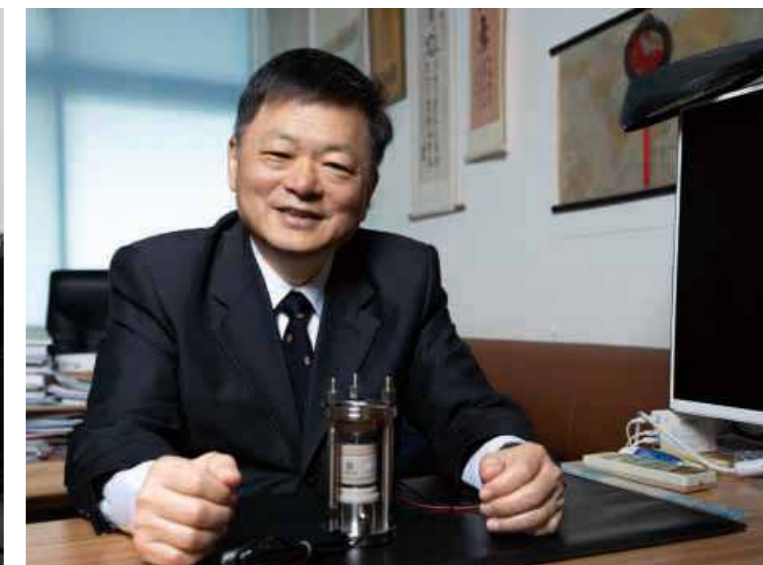
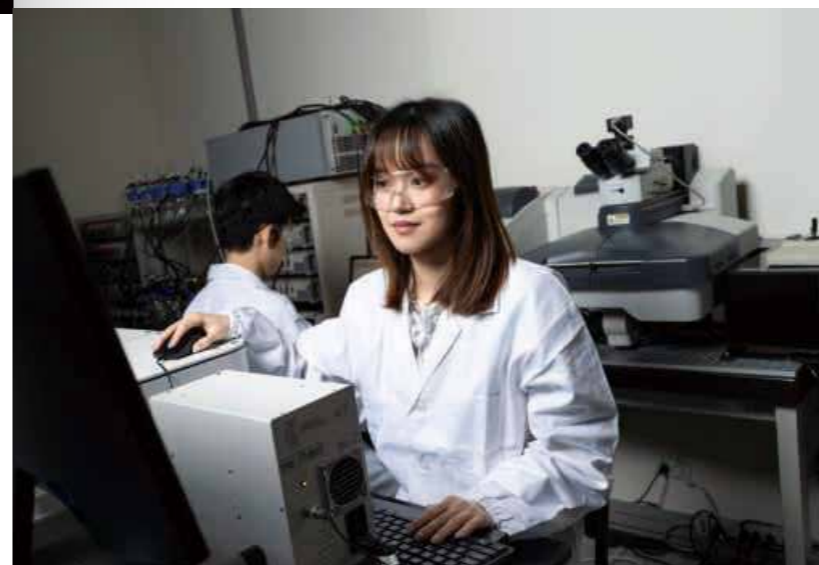
The result: better lithium optimization, longer battery life and safer operation—achieved without adding extra lithium or relying on external pressure controls. This work represents a major step toward practical, high-energy and safe anode-free solid-state batteries.



The spatial distribution of Lithium metal after the first charge with the indium interlayer at the electrolyte interface of the anode-side in all-solid state battery.



The 3D surface visualization of In|LLZTO surface after 1 mAh cm<sup>-2</sup> charging cycle showing uniform surface (left). Void formation upon Li depletion from Li-In interlayer upon deep discharge (right).



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Overall mechanism of diffusive interlayer to control void accumulation at the Lithium/electrolyte interface and controlled cycling conditions.



# IMPROVING THE LIFESPAN OF BLUE OLEDs

Organic light-emitting diodes (OLEDs) are widely used in the screens of cell phones and other consumer electronics. Compared to red and green devices, blue OLEDs are the least efficient and have the shortest lifespans because they have the highest energy demands. This makes it challenging for the OLED industry to produce them reliably. In a standard blue

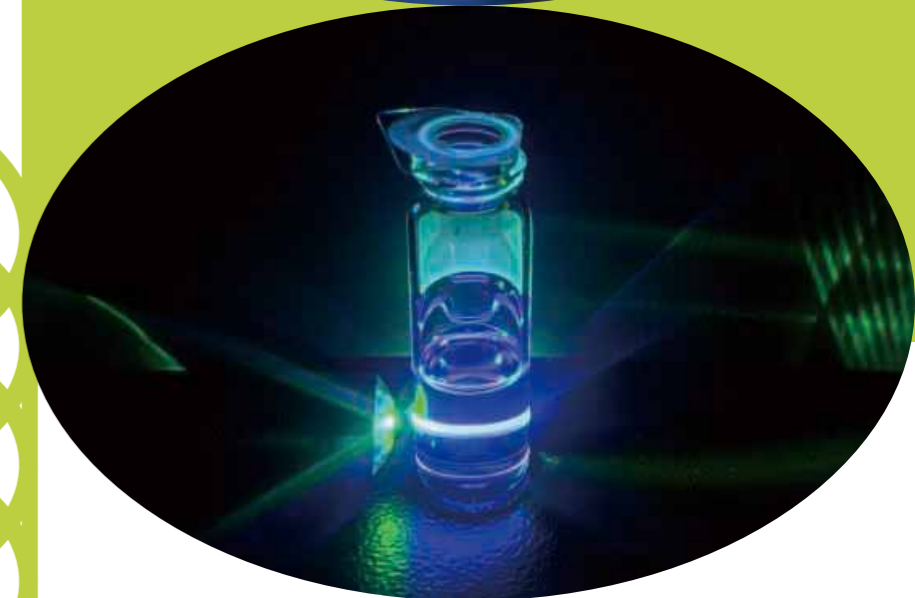
OLED, light is emitted when an electron drops from a high-energy "singlet" state to its ground state, releasing a photon. However, some electrons enter a "triplet" state, which releases energy as heat instead of light. This extra heat accelerates material degradation, shortening the OLED's lifespan.

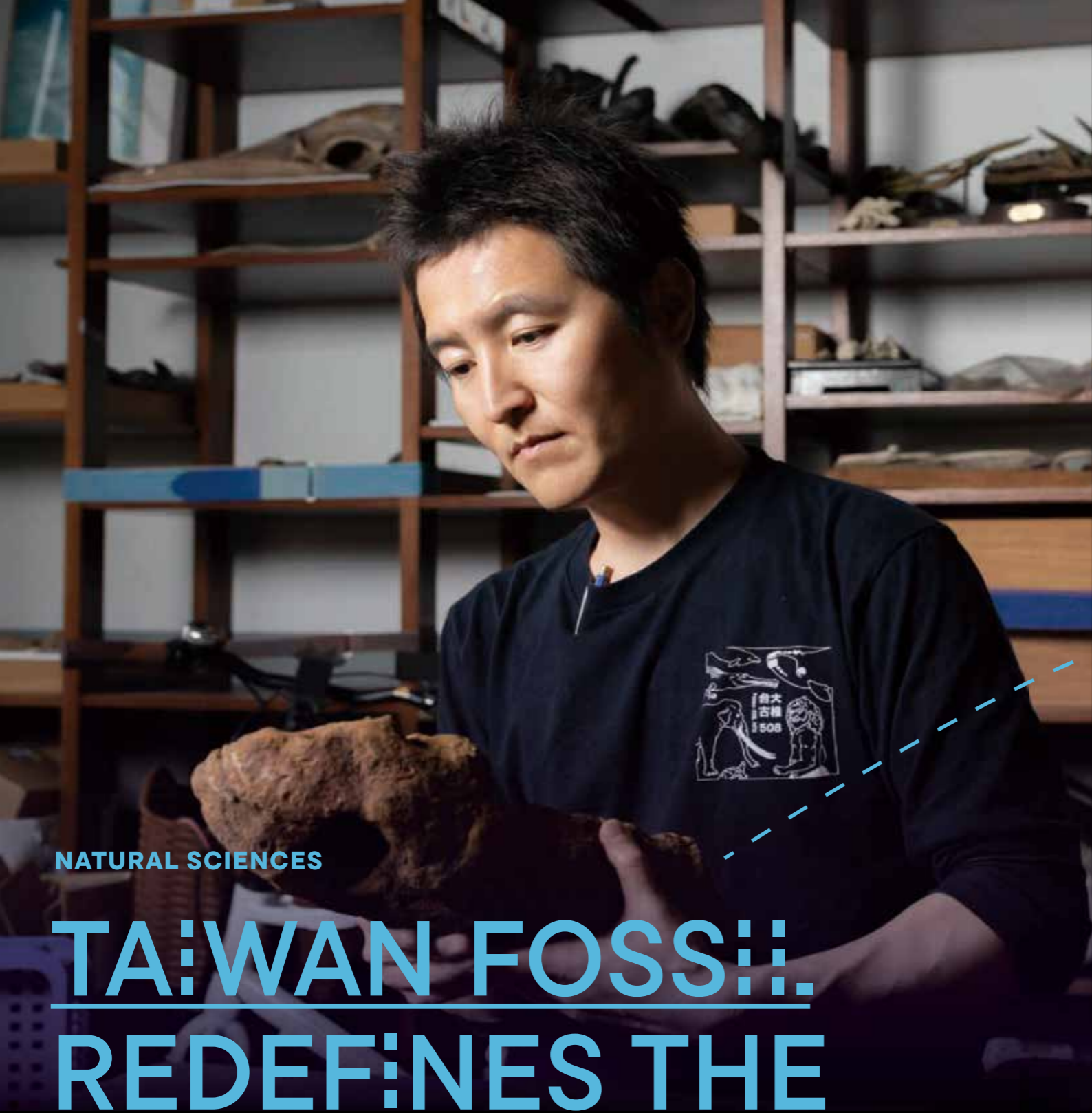
One way blue OLEDs can be made more efficient is through a process called triplet-triplet fusion (TTF). In this process, two dark triplet states combine to form a bright singlet state, recycling the energy that would otherwise be lost as heat. This not only boosts light emission but also reduces heat buildup, helping the OLED last longer.

Professor Jiun-Haw Lee's team has taken this a step further by designing a bi-emitting layer structure. They split the OLED's single emitting layer into two zones: one focused on standard singlet light emission and the other optimized for the TTF process. This innovative design improves the efficiency of triplet recycling and significantly extends the lifespan of blue OLEDs.



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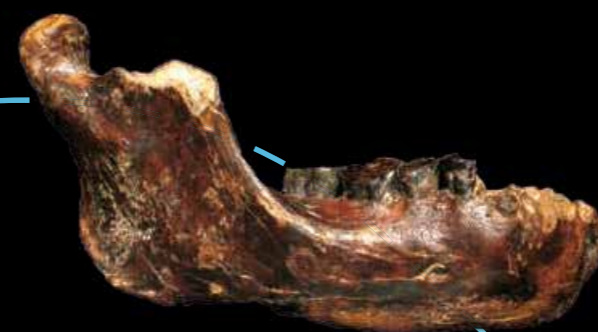
NATURAL SCIENCES

# TAIWAN FOSSIL REDEFINES THE GLOBAL STORY OF DENISOVANS

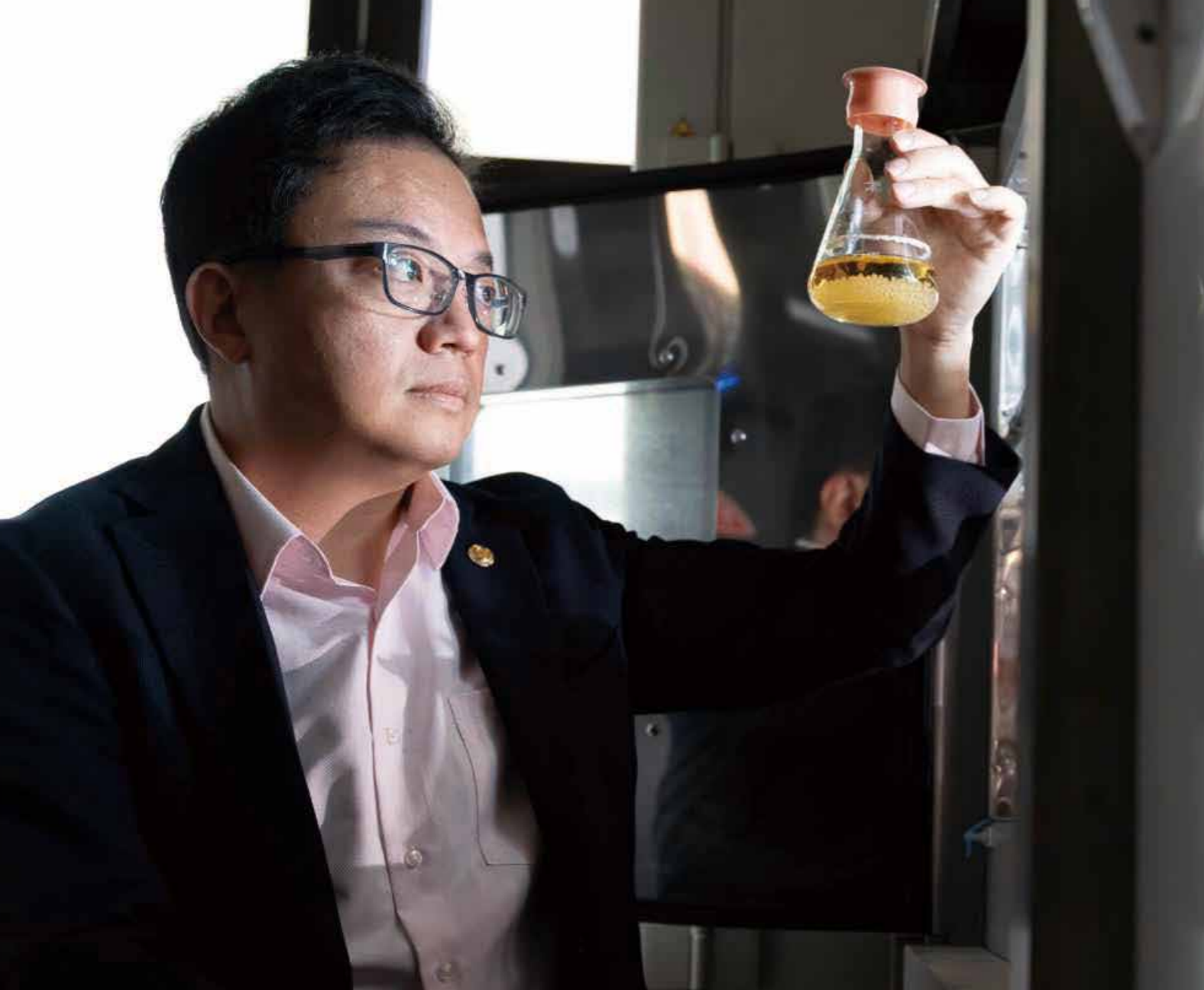
A landmark study co-authored by Professor Cheng-Hsiu Tsai of the College of Life Science identified a prehistoric human fossil from Taiwan as the first known Denisovan discovered in a warm climate. Using advanced ancient protein analysis, the research team confirmed that the fossil, known as Penghu 1, belonged to a male Denisovan who lived approximately 130,000 to 190,000 years ago, or possibly 10,000 to 70,000 years ago.

Previously, Denisovans were known only from fossils found in cold, high-altitude regions such as Siberia and Tibet. This discovery expands the known geographic range of Denisovans, providing the first direct molecular evidence that they inhabited warm, humid subtropical environments. The robust jawbone and unusually large teeth of Penghu 1 help define a distinct Denisovan anatomy, different from the more slender features of Neanderthals. Moreover, the fact that this and several other Denisovan fossils are identified as male suggests that these robust traits may be linked to biological sex, raising new questions about variation within the species.

This research reshapes our understanding of human evolution in Pleistocene Asia. It confirms long-standing genetic predictions that Denisovans were widely distributed across Asia and highlights the power of new molecular techniques to unlock human history in regions where ancient DNA rarely survives.



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# TURNING TAIWANESE CROPS INTO HIGH- VALUE HEALTH INGREDIENTS

The functional food and nutraceutical industries face several longstanding challenges, including limited scientific validation, reliance on imported ingredients and difficulties in standardizing production. To address these issues, Professor Kuan-Chen Cheng, an International Academy of Food Science and Technology fellow, leads a research team at NTU's Institute of Food Science and Technology. The team has developed an integrated platform centered on precision fermentation, linking strain selection, controlled bioprocessing and standardized quality metrics to support outcome-oriented development for Taiwanese crops.

Using this platform, researchers focused on Taiwanese red djulis, also known as red quinoa, to develop high-value health ingredients with antioxidant, anti-inflammatory and anti-aging properties. Fermented red djulis extract was shown to suppress oxidative stress and inflammation induced by PM2.5 particles, while glycine-rich peptides with anti-aging activity were identified. These compounds act through regulation of the NF-κB signaling pathway, supporting applications in functional foods, nutraceuticals and beauty-related products.

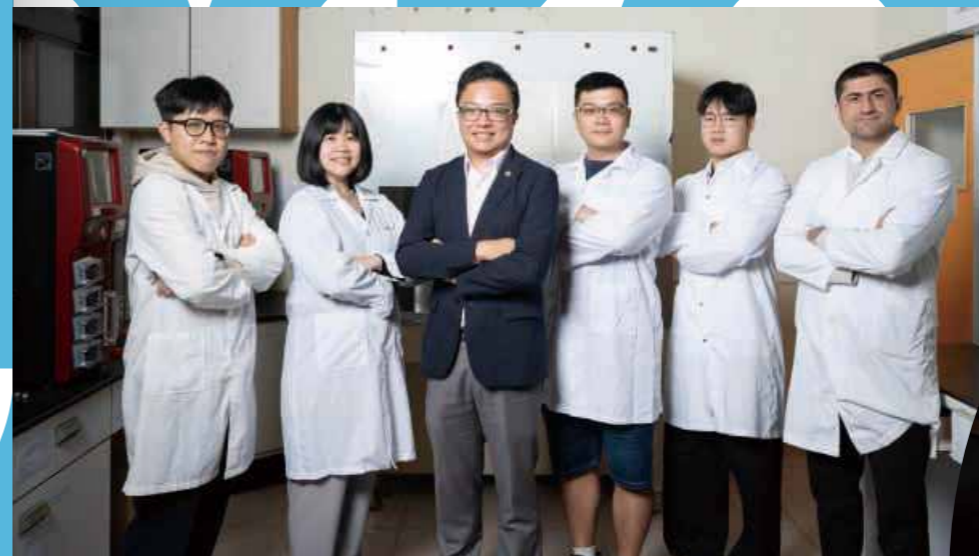
In addition, the team established complete scale-up and purification capabilities, enabling standardized mass production and supporting technology transfer. This work earned the 2025 National Innovation Award



and resulted in six invention patents, three technology transfers and over 10 publications in agricultural and food biotechnology. Conducted through cross-university, interdisciplinary collaboration, this research highlights a development model that integrates precision fermentation, AI-assisted decision making and use of local resources to reinforce health and sustainability.



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HUMANITIES AND SOCIAL SCIENCES

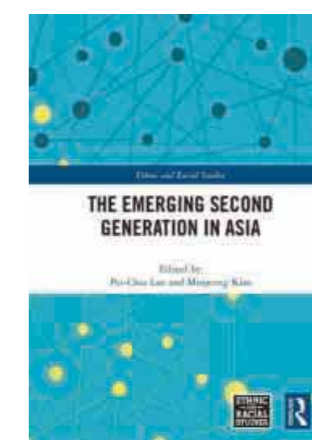
# THE EMERGING SECOND GENERATION IN TAIWAN AND ASIA

This project, led by Professor Pei-Chia Lan of the Department of Sociology, investigates how cross-border marriages and their mixed-heritage children are reshaping the ethnic and cultural landscape in Taiwan. The research team interviewed 61 second-generation adults to examine their identity formation within the context of geopolitical multiculturalism.

Following the New Southbound Policy in 2016, Taiwan's government has promoted multicultural programs to enhance the nation's global standing, economic development and geopolitical security. This has created new opportunities for children of Southeast Asian immigrants to leverage their ethnic backgrounds in academia and their careers. In contrast, the children of immigrants from China face geopolitical stigma associated with the People's Republic of China. Some conceal their family background and emphasize loyalty to Taiwan, while others reframe their Chinese identity as social ties or regional affiliation with particular areas rather than the nation of China.

Professor Lan has published five articles from this project in leading journals, including *International Migration Review* and *Ethnic and Racial Studies*. She also co-edited a special issue with Minjeong Kim from

San Diego State University, featuring six papers on the emerging second generation in Taiwan, Japan, South Korea, Singapore and Hong Kong. This groundbreaking issue, reprinted by Routledge, initiated a critical dialogue with second-generation literature in North America and Western Europe by highlighting how macrostructural factors, such as geopolitics and state policies, shape the identities and lives of the second generation.



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# RURAL SPACES AT THE CENTER OF GLOBAL SUSTAIN- ABILITY AND CHANGE



Challenging the dominant assumption that contemporary global development can be understood solely through urban theory, this study, led by Professor Chi-Mao Wang of the Department of Bio-Industry Communication and Development, demonstrates that rural spaces remain central to addressing key planetary challenges, including climate change, food security, energy transition and biodiversity loss. It promotes the concept of Planetary Rural Geographies, which offers a major theoretical intervention in global debates on planetary urbanization, sustainability and environmental governance.

The research was developed through close international collaboration between scholars in Taiwan and the UK, bringing together NTU and leading UK research institutions with strong global reputations in human geography and social sciences. This cross-regional partnership strengthens international

exchange, comparative theory building and the global visibility of Taiwan-based scholarship. The study was published in *Dialogues in Human Geography*, a leading international journal ranked among the top outlets in human geography and urban studies.

By repositioning rural areas as critical sites of crisis, conflict and hope at the planetary scale, this research contributes to fast-growing global research fields, including sustainability science, environmental governance and critical geography. It reinforces NTU's international research profile, interdisciplinary leadership and engagement with globally significant societal challenges.



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# ACCESS TO FINANCIAL DISCLOSURES CHANGES CORPORATE INNOVATION STRATEGIES



This research highlights that better access to corporate financial disclosures impacts how firms manage knowledge spillovers from their innovations. Conducted by Professor Yen-Cheng Chang, Professor Kevin Tseng and Ph.D. candidate Tzu-Wen Yu from the Department of Finance, the study was published in *The Accounting Review*.

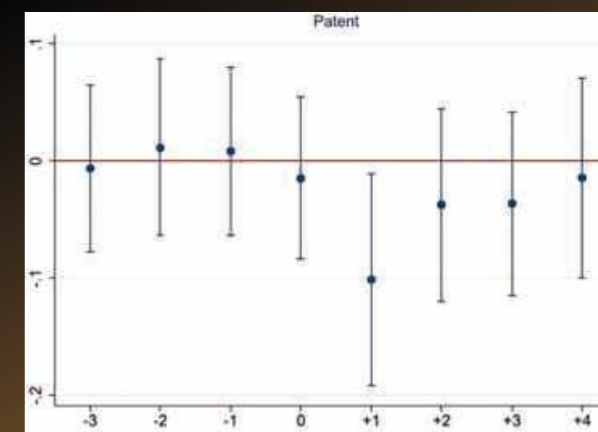
The research team utilized the regulatory change in the 1990s by the Securities and Exchange Commission requiring all publicly listed firms to disclose their financial reports online. This regulation promoted low-cost access to corporate financial information, risking more knowledge spillovers to competitors that hamper research and development (R&D) incentives. The unique features of this policy allowed the team to randomly assign treated and control firms that led to the econometric identification of causal effects.

Using a stacked difference-in-differences approach, the team found that while low-cost access to financial reports did not change R&D inputs, the treated firms significantly reduced the amount and quality of patent disclosures. Treated firms also relied more on trade secrecy, proxied by inventor retention, as an alternative way to manage knowledge spillovers.

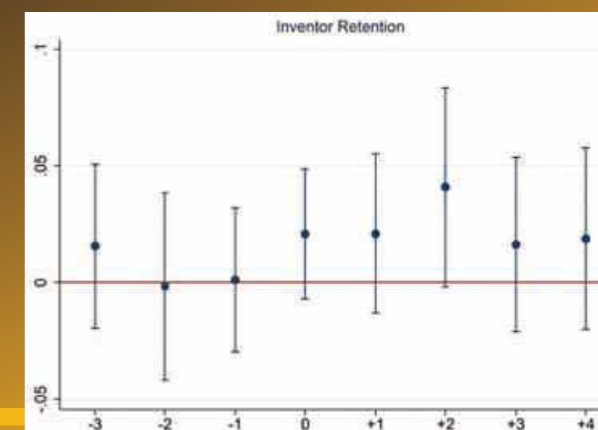
This research bears important implications for disclosure regulations and corporate innovation. The study showed that regulations to promote dissemination of corporate financial disclosures unintentionally reduce patent disclosures, an important channel of knowledge spillover and economic development. These findings impact future policy decisions and research in terms of designing disclosure regulations and understanding innovation activities.



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▲ Dynamics of the Treatment Effect: Patents



▲ Dynamics of the Treatment Effect: Inventor



# UNDERSTANDING INTELLECTUAL CHANGE AND WOMEN'S ROLES IN TANG CHINA



Prof. Chen giving a lecture on conceptions of justice/rightness in traditional China at the Chinese University of Hong Kong in November 2017.

By examining Confucianism as well as women's and family history, Professor Jo-Shui Chen of the Department of History has significantly advanced understanding of Tang-era China. Professor Chen specializes in both transformative historical shifts and structural questions, primarily in the intellectual history of Sui-Tang China, with a particular focus on the Tang-Song transition (9th-11th centuries). His research addresses the emergence of intellectual change, a pivotal outcome of this transition that later became the cultural orthodoxy of late imperial China. By examining the mid-to-late Tang Confucian revival as the initial catalyst for this shift, Professor Chen provides multi-layered analyses and systematic explanations.

With a focus on women's and family history during the Tang era, Professor Chen examines the intricate relationships between Tang women and their natal families, identifying key elements and correlations within their domestic lives. He has explored other critical facets of medieval society, including aristocratic lineages, the indigenous peoples of the Southeast and eunuch communities. Professor Chen is also recognized for his research of long-term issues in social and political thought in comparative light. He focuses specifically on the evolving conceptions of gōng (公, the public) and yí (義, justice) in Chinese history.

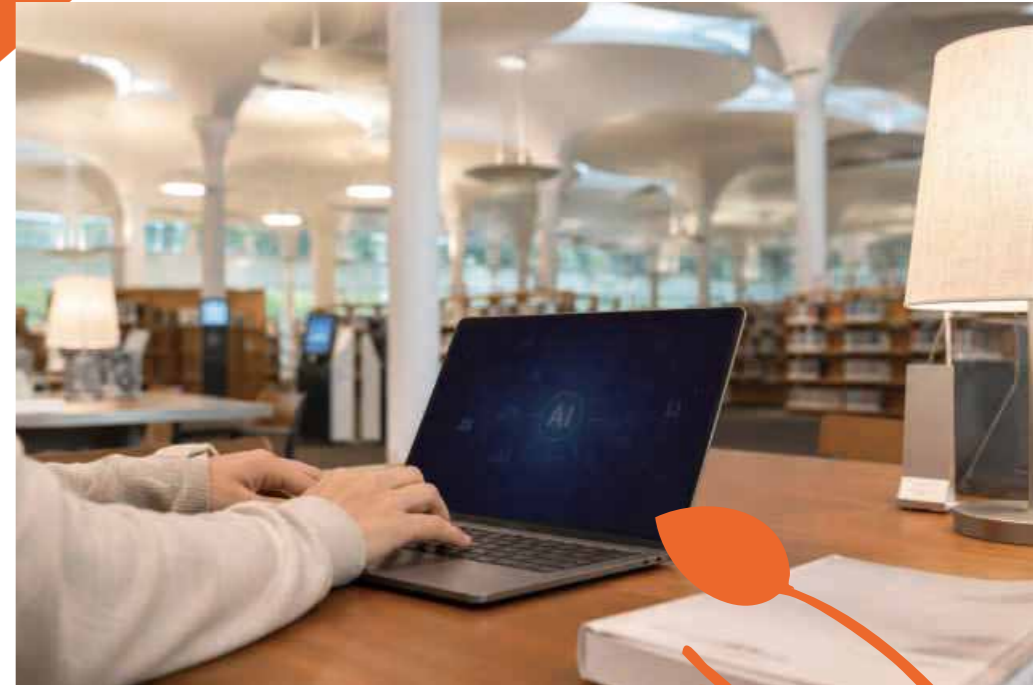


# INNOVATION TO TRANSFORM US



- **Innovating Classroom Models**
- **Academia Meet Industry**

# PREPARING YOUNG SCIENTISTS TO LEAD AI - ENABLED SCIENCE

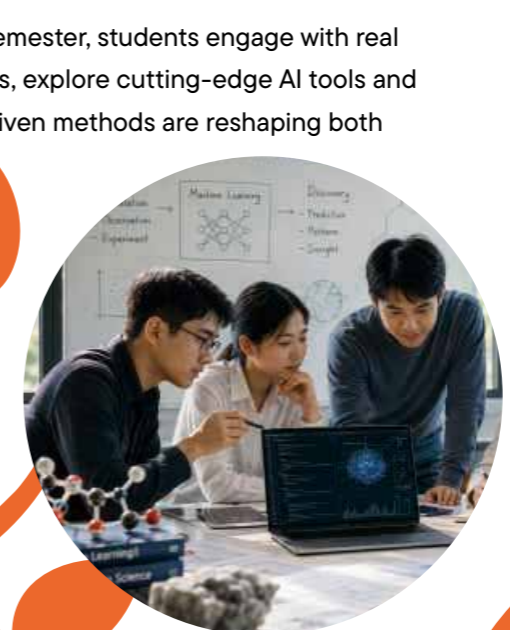


The College of Science launched “AI in Science,” an innovative course that bridges frontier AI with real scientific inquiry. It brings together leading scholars from mathematics, physics, chemistry, earth sciences, geography, atmospheric sciences and psychology to demonstrate how AI is transforming modern scientific discovery. Unlike traditional courses, this course creates an interdisciplinary learning environment where students learn how AI accelerates research across domains—from particle physics and climate modeling to chemistry, geospatial analysis and cognitive science.

Throughout the semester, students engage with real scientific problems, explore cutting-edge AI tools and learn how data-driven methods are reshaping both

fundamental research and real-world applications. The course also introduces the broader context of Industry 4.0, helping students understand how intelligent technologies are redefining scientific practice and global industry.

By integrating lectures, hands-on demonstrations and cross-field dialogues, the course equips students with the mindset and skills needed to become future leaders in AI-enabled science. It prepares young scientists to navigate and shape the rapidly evolving landscape of research and innovation.



# INTERDISCIPLINARY INITIATIVES IN ENGINEERING EDUCATION EMPOWER STUDENTS



NTU also leads the Cross-Disciplinary Bachelor's Degree initiative, empowering students to design coherent, focused learning pathways that bridge multiple fields. Guided by faculty mentors, students craft individualized programs that reflect emerging societal challenges—from AI sustainability to biomedical innovation. Major universities across Taiwan are adopting this framework, signaling a shared commitment to flexible, innovative education.

Together, these two initiatives reflect NTU's vision for engineering education: rigorous, applied, interdisciplinary and future-oriented. The College of Engineering is not only advancing research, it is preparing students to solve problems, integrate knowledge and lead in the AI era.

The College of Engineering is reshaping engineering education in Taiwan through two major initiatives, both centered on the idea that prospective engineers must not only acquire knowledge—they must learn to apply, integrate and transform it into real-world capabilities.

The New Engineering Education Method Experiment and Construction (NEEMEC) project, founded by Professor Jung-Ho Cheng and now jointly led by Professor Kuei-Yuan Chan and Professor Fu-Ling Yang, has become a national model for problem-centered learning. NEEMEC links core courses with real-world engineering challenges, enabling students to apply theory directly through design, experimentation and teamwork. With over 600 redesigned courses, hundreds of faculty and tens of thousands of students participating across Taiwan, the model is impactful and scalable.





# D-SCHOOL EXPLORATORY LEARNING RECOGNIZED AS TOP EDUCATION INNOVATION

Since 2021, the College of Innovation and Design (D-School) has pioneered the Exploratory Learning Program, offering students a “gap year” learning experience during academic studies. With over 200 participants to date, the program empowers students to step outside the classroom to pursue international education, artistic creation, entrepreneurial ventures and personal growth.

The program ignites students' passion and potential by breaking through the boundaries of traditional learning, leveraging external resources and encouraging cross-disciplinary collaboration. Its impact on higher education and social innovation was nationally recognized as one of the 2025 Top 100 Education Innovations by Parenting Magazine.

The Exploratory Learning Program is supported by 22 faculty mentors from 11 colleges, who accompany and advise students along their journeys. Speaking of the program, Executive Vice President Shih-Torng Ding said, “I’m proud of D-School’s efforts and moved by the growth and creativity of our students.” The program’s chief guide Professor Ruby Yun-Ju Huang said, “We’ve witnessed students find their own paths through autonomous learning while growing stronger through facing challenges.” The program celebrates exploration that values journey over destination and questions over answers.



QR CODE LINK FOR MORE INFO



# NTU LEADS INITIATIVE TO INNOVATE TAIWANESE UNIVERSITIES' CURRICULA



As the secretariat of the University Academic Alliance in Taiwan (UAAT), an alliance of 12 of Taiwan's most prestigious universities, NTU launched the UAAT Innovative Curriculum and Talent Development Program in 2025. Led by the Office of Academic Affairs, the program is built upon three core strategies: curriculum renewal, frontier course innovation and joint graduate supervision.

Through curriculum renewal, participating universities compare their programs against QS Top 100 universities, deepen collaboration with partner schools and systematically renew course frameworks and content. Frontier course innovation emphasizes pedagogical innovation, interdisciplinary integration and entrepreneurial thinking. It incorporates

proven curricula and course modules from leading international universities while developing sustainable frameworks for ongoing curriculum innovation. Joint graduate supervision engages distinguished international scholars as co-advisors, providing online mentorship. The program supports air travel for visiting scholars and enables students to undertake overseas research internships, fostering co-authored publications and enhancing global research visibility.

The expected outcomes of these initiatives include updated curriculums, expanded course offerings, co-authored academic publications and higher participation in overseas programs, elevating the global presence of Taiwan's higher education.





ACADEMIA MEET INDUSTRY

# INTEGRATING CASE-BASED LEARNING AND GEN-AI TOOLS INTO MEDICAL EDUCATION

The College of Medicine redesigned a one-semester biostatistics course for students in nursing, pharmacy and medical technology. This required course enrolls approximately 100 undergraduates annually and now integrates case-based learning with traditional didactic lectures to apply statistical principles to clinical problems.

The course was delivered by a multidisciplinary team of six instructors, including a physician and five faculty in nursing, pharmacy, medical technology, medical education and statistics. Students worked in teams on real-life clinical scenarios and utilized generative AI (GenAI) for study design, data analysis and interpretation. The mean course rating rose from 3.93 to 4.69 on a 5-point scale following its redesign.



In 2025, this curriculum expanded the case-based learning to all statistical topics and required students to integrate GenAI in the learning process. This model aims to enhance students' biostatistics competencies and support their professional identity development. Students were encouraged to document their GenAI interactions and reflections, and instructors provided targeted feedback. The goal was to help students create their own GenAI tutors to enhance their learning capabilities.

This course reform is supported by grants from the College of Medicine and Ministry of Education's Teaching Practice Research Program. The long-term goal is to advance evidence-based medical education, where educational reforms, particularly those integrating novel scientific or technological advances, are grounded in well-designed research.



In Taiwan's rapidly evolving construction industry, Building Information Modeling (BIM) is emerging as a critical skill. To equip students for this shift, Professor Shang-Hsien Hsieh has redesigned his BIM course into a two-stage format that blends flipped classroom learning with a team-based project.

During the first third of the semester, students engage in a flipped classroom approach: they watch pre-recorded video lectures before class to learn fundamental BIM concepts. In-class time is then devoted to targeted questions, group discussions and hands-on exercises, helping students consolidate their understanding and address misconceptions.

The remaining two-thirds of the course focuses on a comprehensive renovation project. Teams

are assigned a three-story building represented by an architectural BIM model and a hypothetical site in Taipei City. Acting as BIM consultants, they transform the existing structure into a commercial facility, considering sustainable renovation strategies, project management and business feasibility. Final presentations are evaluated by academic and industry experts, providing students with feedback that mirrors real-world experiences.

This course design moves beyond tool-centered instruction toward a practice-oriented learning environment. Students reported increased confidence in applying BIM to real projects and a deeper understanding of how digital models can support sustainable renovation.

# FLIPPED CLASSROOM BIM: FROM FUNDAMENTALS TO RENOVATION PROJECTS



# CAREER CENTER CONNECTS STUDENTS WITH INDUSTRY LEADERS



The Career Center continues to cultivate future-ready talents through cross-disciplinary learning and industry-academia collaboration. Its course “Get Ready for Your Career” enhances students’ cross-disciplinary collaboration and workplace communication skills. The course invited distinguished guest lecturers, including the CEO of the TSMC Charity Foundation, CSO of Taiwan Cement Corporation and CEO of KPMG Taiwan, who shared first-hand insights into industry trends, essential competencies and the evolving expectations for emerging talents.



In addition, the Center introduced the “Building Future Leaders” course, which brings in professional consultants and senior executives from diverse industries to serve as mentors. Through industry engagement, online learning modules and flipped classroom sessions, the course strengthens students’ communication, employability and decision-making skills. Practical mentorship supports students in applying classroom knowledge to real-world professional contexts.



These initiatives demonstrate NTU’s sustained efforts to nurture globally competitive talents and equip students for rapidly changing future landscapes. The University earned international recognition for this approach with the 2025 Brandon Hall Group HCM Excellence Award for Best Competencies and Skill Development.





# EVENTS TO CONNECT US

- Bringing the World to NTU
- Sending NTU to the World
- Community Building



BRINGING THE WORLD TO NTU

# GIS TAIWAN 2025 : INSPIRING A CYCLE OF EMPOWERMENT



Supported by the Office of Student Affairs, the 16th Global Initiatives Symposium in Taiwan (GIS Taiwan) was held on campus from July 7 to 11, 2025. For sixteen years, GIS Taiwan has united students with leaders from industry, government and academia to foster cross-generational, cross-disciplinary and international exchange. With over 100 participants from ten countries, this year's GIS Taiwan empowered youth to think globally and act locally.

This year's theme, empowerment, encouraged youth to reflect, engage and act with global perspectives. The opening ceremony featured President Wen-Chang Chen as well as keynote speakers Nelson Chang, Chairman of Taiwan Cement Corporation,

and François Wu, Deputy Minister of Foreign Affairs. The closing ceremony concluded with remarks from Micron Taiwan Chairman Donghui Lu and TECO Chairman Morris Li.

Forum highlights included the Leader's Dialogue, where professionals from six emerging industries exchanged insights. Students showcased their creativity through project presentations, guided by experts

who encouraged intergenerational collaboration. In addition, the World Café event gathered fifteen diplomats, including former Minister of Foreign Affairs David Lin, to discuss global issues. The accompanying Cultural Festival featured booths from international institutions such as America in Taiwan and the Goethe-Institute.





Academia and industry intersected again at NTU during a 10-day intensive program on semiconductor technologies called "Train the Trainers: Next-Generation Semiconductor Technologies." The program, organized by the Office of International Affairs and the College of Electrical Engineering and Computer Science, welcomed elite faculty from Thailand's top universities to immerse themselves in AI, quantum computing and nanoelectromechanical systems (NEMS).

Supported by the Thailand Trade and Economic Office, the curriculum balanced technical theory with geopolitical context. Visiting scholars engaged with faculty on topics ranging from chip fabrication to semiconductor supply chains. Participants also explored the TSMC-NTU Joint Research Center and NTU NEMS Center, experiencing firsthand Taiwan's world-class research infrastructure.



The program extended beyond campus, visiting the Taiwan Semiconductor Research Institute and the TSMC Innovation Museum. These excursions, coupled with cultural immersions in Dadaocheng and Yilan, provided a holistic view of Taiwan's culture and technology.

This initiative is more than a workshop; it is a catalyst for bilateral synergy. By equipping Thai educators with cutting-edge insights, it fosters a resilient talent pipeline and solidifies the academic bridge between Taiwan and Thailand, paving the way for collaboration in the global high-tech landscape.

# TAIWAN AND THAILAND STRENGTHEN SEMICONDUCTOR TIES



MEDIATEK



The 2025 Chip-based Industrial Innovation Program marked a significant milestone in NTU's mission to cultivate the next generation of semiconductor leaders. This year, 26 students from India, Italy, Japan, the Philippines and Serbia gathered at NTU for a two-week intensive program on integrated circuit (IC) design.

The program blended theoretical rigor and industrial application. Led by distinguished faculty from the College of Electrical Engineering and Computer Science and the College of Social Sciences, the curriculum spanned the semiconductor value chain, from advanced IC design processes and chip manufacturing to the nuances of digital and analog circuit design. With a hands-on curriculum, students explored high-precision chip manufacturing in NTU's state-of-the-art cleanrooms and production automation

at the Intelligent Robot & Automation Lab. Beyond the classroom, participants visited industry titans including TSMC, MediaTek, STMicroelectronics and Kneron.

The initiative is central to Taiwan's strategy to "cultivate, retain and attract talent," Associate Vice President for International Affairs Kuo-Hsin Yang said. By serving as a global hub for IC innovation, NTU is fostering career growth and international collaboration, which is essential for continued technological progress.



# SHAPING IC DESIGN THROUGH INTERNATIONAL COLLABORATION

# TAIWAN BREAKS RECORDS AT THE 22ND INTERNATIONAL LINGUISTICS OLYMPIAD

NTU hosted the 2025 International Linguistics Olympiad (IOL), one of twelve International Science Olympiads for secondary school students, marking the first time the event was held in Taiwan. Organized by the College of Liberal Art's Graduate Institute of Linguistics, the 22nd IOL gathered outstanding young linguists from 43 countries, split into 57 teams. Beginning on July 20, participants joined a week-long event that emphasized cross-linguistic analysis and cross-cultural problem solving.



In the individual contest, Taiwanese contestants received two silver medals, five bronze medals and one honorable mention. In the team contest, Taiwan's two national teams won gold and silver medals. In total, Taiwan earned one gold, three silver and five bronze medals, as well as one honorable mention, the highest number of awards among the participating countries and setting a new record for Taiwan at the IOL. These accomplishments reflect the strength of linguistic education in Taiwan and its capacity to cultivate interdisciplinary talent.



The School of Political Science and Economics (SPE) brings global ideas to the forefront of the curriculum, encouraging students to think critically and debate openly. As a fully English-taught school with programs in political economy, finance, and leadership and management, SPE gives students the chance to explore major international issues and meet the experts shaping them. In 2025, SPE hosted lectures by three Nobel laureates in Economic Sciences, each exploring complex ideas about politics and economics in the modern era.

At the first lecture, Dr. Myron Scholes spoke on unpredictable outcomes, artificial intelligence and financial economics. He explored how AI may reshape the way we understand risk, judgment and market behavior. In June, Dr. Roger Myerson led a five-part lecture series on the empirical study of international conflict, joined by prominent scholars from political science and economics. Over the course of the series, conflict emerged not as a

distant geopolitical topic, but as a problem of evidence, interpretation and interdisciplinary analysis. Later in the year, Dr. James A. Robinson delivered a keynote lecture on political economy and institutional development, focusing on issues of governance, power and national development.

These events are part of an academic culture that asks students not just to absorb knowledge, but shape ideas through argument, evidence and intellectual encounters. At SPE, questions of finance, conflict and power do not remain abstract; they enter the classroom through active debates, tested in the presence of the world's leading experts.

# NOBEL LAUREATES EXPLORE POLITICS AND ECONOMICS WITH STUDENTS



# A BRIDGE TO THE FUTURE : NOBEL LAUREATES GATHER AT NTU

Embodying NTU's commitment to dynamic, global intellectual exchange, Taiwan Bridges brought 31 Nobel laureates to 12 leading educational institutes across Taiwan from Nov. 2025 to May 2026. Organized by NTU and Academia Sinica and generously supported by Chairman Raymond Soong of Lite-On Technology, Taiwan Bridges links science with society by fostering critical dialogues that resonate far beyond the lecture hall.

NTU hosted six of these Nobel laureates, including Sir Andre Geim (Physics, 2010), Dr. Eric S. Maskin (Economics, 2007), Dr. Donna Strickland (Physics, 2018), Dr. Morten P. Meldal (Chemistry, 2022) and Dr. May-Britt Moser (Medicine, 2014). The series concluded with Dr. Joachim Frank (Chemistry, 2017), who shared groundbreaking advancements in structural biology. These talks tackled concrete global challenges and garnered enthusiastic responses from NTU students, who were inspired not only by scientific breakthroughs but by the laureates' personal stories of resilience and curiosity. Complementing these academic lectures, NTU worked with the Swedish

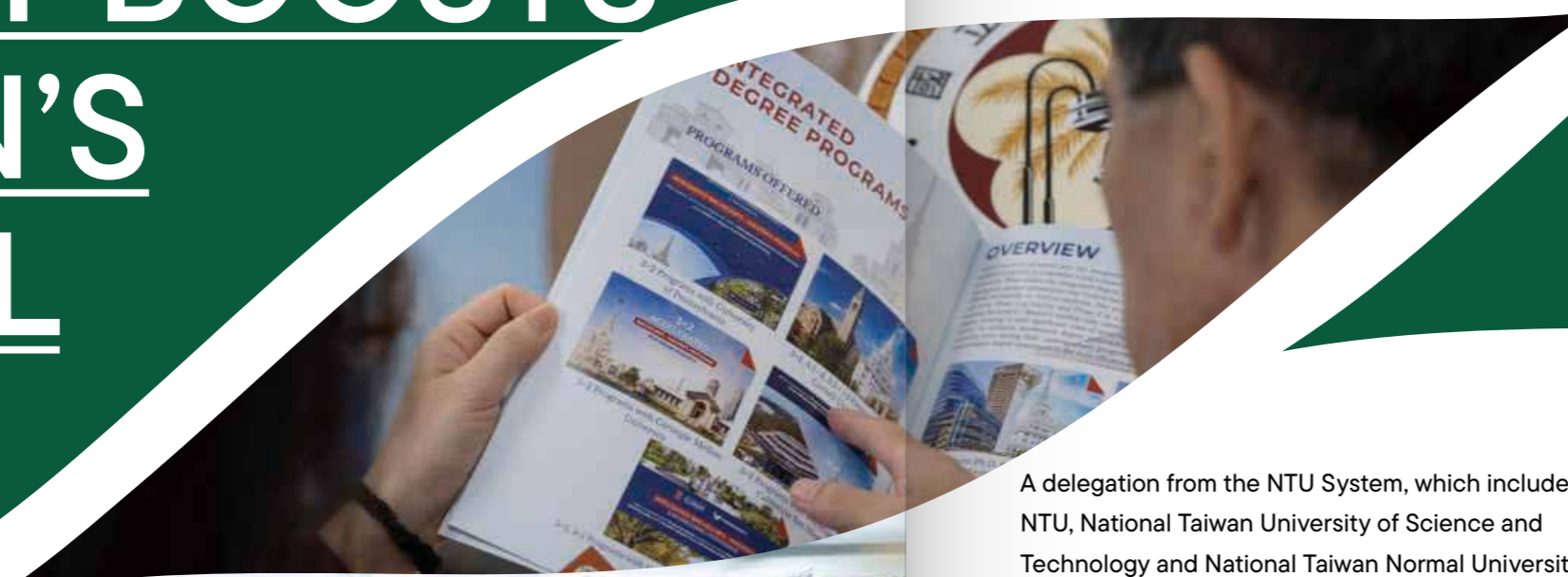
Representative Office in Taiwan to host an exhibition introducing the spirit of the Nobel Prize.

To sustain this momentum, the Taiwan Higher Education Nobel Laureates Association was launched in March 2025. Chaired by NTU President Wen-Chang Chen, the Association unites 17 universities, 14 leading corporations and the Industrial Technology Research Institute. Dedicated to institutionalizing these exchanges, the Association will continue inviting visionary laureates for long-term collaboration. By forging permanent ties between today's brightest minds and tomorrow's leaders, Taiwan Bridges is a testament to NTU's pursuit of academic excellence and scientific progress.



SENDING NTU TO THE WORLD

# DELEGATION TO QS ASIA PACIFIC SUMMIT BOOSTS TAIWAN'S GLOBAL BRAND



A delegation from the NTU System, which includes NTU, National Taiwan University of Science and Technology and National Taiwan Normal University, attended the QS Higher Education Summit: Asia Pacific 2025 in Korea in November, led by Professor Shih-Torng Ding, NTU Executive Vice President and CEO of the NTU System.

navigating challenges faculty and students face in the era of AI. The Office of International Affairs engaged with institutions from Singapore, Hong Kong and Korea to address attracting and retaining global talent. By sharing innovative ideas and addressing shared dilemmas, the delegation demonstrated Taiwan's leadership in education and elevated its influence within the global academic community.

This was the first time the NTU System appeared together on the international stage, garnering significant attention from academic partners across Southeast Asia, Japan, Korea and the Middle East, who sought to engage with the system's achievements in research innovation and international collaboration. NTU System delegates played a pivotal role in the summit. Professor Ding joined representatives from leading Southeast Asian universities to discuss



# NTU BEYOND BORDERS: EMPOWERING GLOBAL VISIONARIES

The NTU Beyond Borders initiative enhances student global mobility and cross-cultural competence through international internships, academic exchanges and social service projects. It supports student growth across three main areas: academic mobility, experiential learning and student initiatives. Its experiential learning series sends students from traditional classrooms to the front lines of global innovation and social impact.

This year's participating students spanned the globe, diving into niche industries. In Tokyo and the Czech

Republic, students explored the intersection of heritage and entrepreneurship. Meanwhile some students traveled to South Africa for wildlife forensics, while others investigated blue economy solutions in Okinawa. From high-fashion avenues of Paris to sustainable regional revitalization in Awaji Island, students engaged directly with pressing societal challenges.

The initiative also deepened ties with prestigious US institutions. Through specialized entrepreneurship and innovation courses at the New Jersey Institute of Technology, University of Washington and Northwestern

University, students sharpened their strategic thinking alongside global experts. By integrating practical action with altruistic leadership, Beyond Borders is not just sending students abroad, it's cultivating a generation of proactive global citizens.



# NTU HONORED WITH LINKEDIN FUTURE TALENT PARTNERSHIP AWARD

In March 2025, the global professional networking platform LinkedIn honored NTU with the LinkedIn Future Talent Partnership Award, which recognizes institutions that effectively utilize LinkedIn talent solutions and demonstrate outstanding engagement on the platform. NTU was commended for its exceptional adaptability, innovation and creativity in navigating challenging times and leading future workplace trends.

commitment to equipping students with the skills and knowledge needed for professional and personal success. NTU stands out for its efforts to cultivate future talents. The award recognizes how NTU aligns with current industry demands and adopts a forward-thinking approach, preparing students to meet the challenges of tomorrow's careers. NTU will continue to enhance its educational programs and contribute to the development of outstanding talents that underpin our society.

LinkedIn emphasizes partnerships with academic institutions, recognizing those who share their





COMMUNITY BUILDING

# STUDENT AWARD HIGHLIGHTS LEADERSHIP IN HEALTH, SUSTAINABILITY AND EQUITY

NTU annually awards the Student Social Devotion Special Award, honoring students who utilize their professional knowledge to respond to societal needs and show altruism. This year the award was given to four students who are committed to giving back to society and fostering sustainable change.

The first awardee, Hui-Chu Hou from the School of Pharmacy, actively leads student organizations and promotes public health services. She has planned multiple educational events about health, represented Taiwan at the World Health Assembly and secured Taiwan to host the 2027 World Pharmacy Students' Federation Annual Congress.

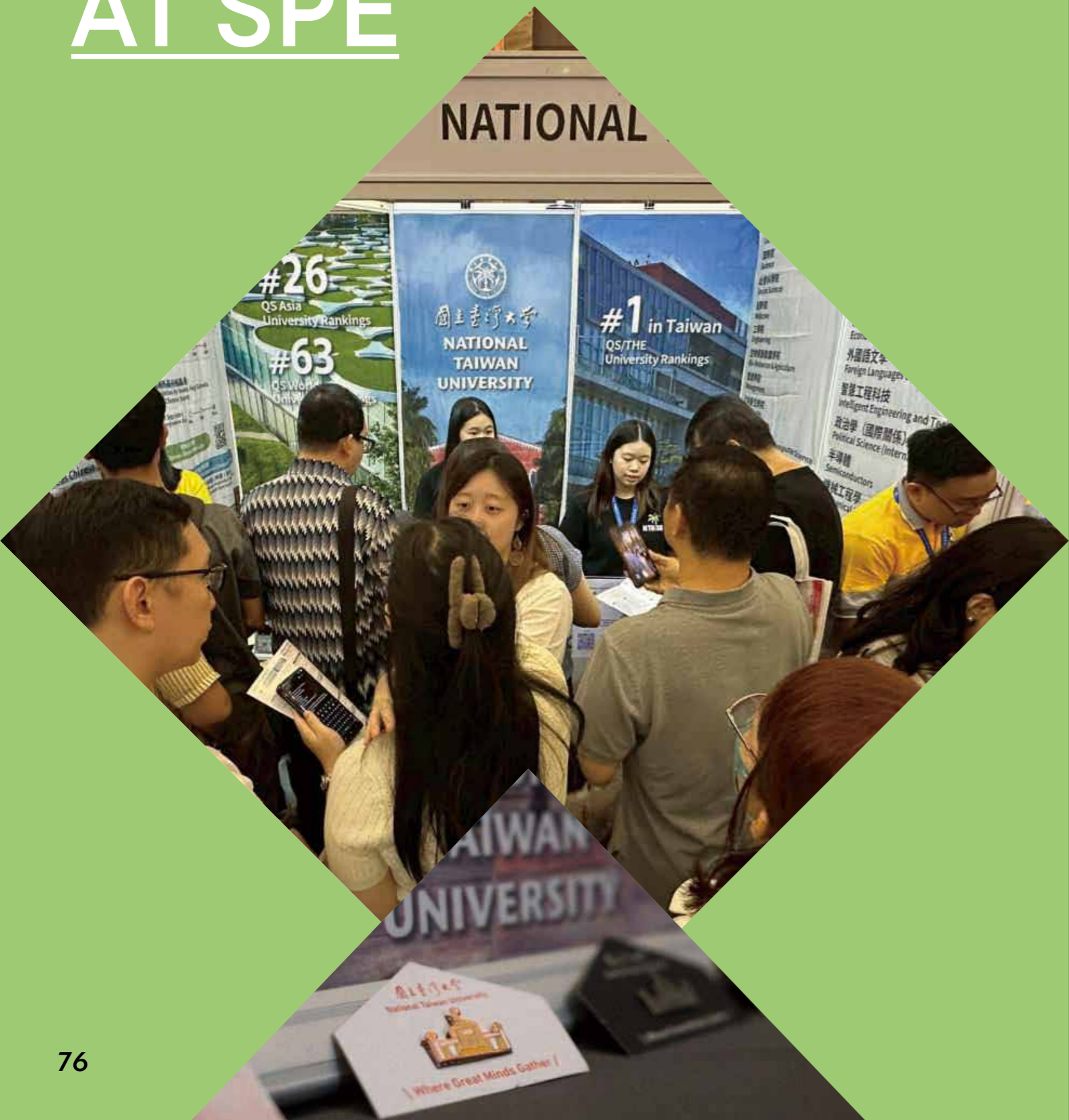
Mariana Gabrielle Cangco Reyes from the College of Science promotes global sustainable development and empowers youth. Recognized with the Student Social Devotion Special Award this year, she also won second place at the New York Youth Assembly and was honored with the Risk Taker Award by the University of Pennsylvania.

The third awardee, Chia-Heng Hsieh from the Institute of Environmental and Occupational Health Sciences, is a public health advocate. He served on the Taiwan Public Health Students Association and New Taipei City Government Youth Committee. He also initiated a project to destigmatize HIV, demonstrating exceptional dedication to the public health sector.

Finally, Yu-Han Li from the College of Design and Innovation, or D-School, integrates social issues into education, responding to the unequal distribution of resources. He works with teachers to promote community-based education in underprivileged areas across Taiwan, demonstrating his commitment to equality in education.



# HOW DIVERSITY SHAPES LEARNING AT SPE



As a fully English-taught school with an international outlook, the School of Political Science and Economics (SPE) brings together students from a wide range of nationalities, cultures and backgrounds. Diversity at SPE shapes classroom discussion, group work, friendships and the rhythm of the student body.

This diversity begins with access. Through scholarships, international education fairs and localized recruitment efforts, SPE reaches people who might never have imagined studying in Taiwan. Each class of students brings a rich range of life experiences, academic interests and ways of seeing the world. In 2025, its inaugural year, SPE welcomed around fifty master's students into its first two programs, political economy and finance. In its

second year, with the addition of the leadership and management program, SPE is expected to grow to more than one hundred graduate students.

Diversity in the classroom makes discussion more thoughtful, dynamic and rewarding. Learning at SPE does not stop with lectures and assignments, it unfolds through conversation, collaboration and the exchange of ideas. Beyond the classroom, students broaden their horizons through exchange programs, dual degrees and internships, where they connect academic study with practical experience and gain confidence in unfamiliar settings.

# SUPPORTING GLOBAL AND OVERSEAS ALUMNI IN TAIWAN



The Office of International Affairs and Office of Student Affairs hosted the NTU Global & Overseas Alumni in Taiwan (GOAT) inaugural gathering on June 7, 2025. Over 100 alumni and family members from around the world joined the celebration and witnessed this historic moment together. This new organization supports international students staying in Taiwan after graduation, strengthening the connection between alumni and their alma mater.

“The long-awaited NTU GOAT is finally here, reflecting the growing impact of our global alumni in Taiwan,” Vice President for International Affairs Hsiao-Wei Yuan shared in her remarks. NTU GOAT would help graduates build lasting connections and a sense of belonging in Taiwan, Vice President for Student Affairs Shih-Wei Chu said.

NTU GOAT’s first president is Alex Yen, an American alumnus and current Digital Marketing Director at Moderna. The vice president is Coco Yap from Malaysia, who currently serves as a Business Development Representative at Cake, an international talent community. Together, they lead a passionate and energetic team dedicated to building a GOAT family, promoting intercultural exchange and enhancing NTU’s global brand and talent attraction.



# OPENING A COMMUNAL LIVING AND COOKING SPACE IN THE GRADUATE DORM



The first Graduate Dorm unveiled its newly renovated multifunctional basement this year, providing students with a communal area to dine, learn and interact. Designed to meet students' diverse needs, the area includes a shared kitchen, meditation and prayer room, recreation and fitness zone and flexible discussion areas with movable partition walls. Inspired by the concept of co-living spaces, the project was co-designed by students, showing NTU's commitment to a student-oriented campus.

The dormitory also launched a monthly series called "Good Meal Time," inviting the NTU Cook'n Taste Club and professional chefs to lead interactive workshops on healthy and creative cooking. Complemented by food-safety talks and friendly cooking competitions, the program fosters teamwork, wellness and cross-cultural exchange. The renovated basement is now a vibrant hub for student learning, community connection and holistic well-being.



# NTU HIGHLIGHTS DIGEST





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# BEYOND EDUCATION: NTU'S ROLE IN SHAPING SOCIETY AND CULTURE

In an era marred by climate volatility, social fragmentation and cultural precarity, NTU regards knowledge not as an abstract asset, but as an instrument for collective resilience. The University is committed to linking academic excellence with social responsibility and translating research capacity into sustained action that addresses real-world challenges.

This issue of NTU Highlights shows how NTU's expertise is mobilized across borders and communities. In Belize, researchers collaborated with local partners to develop integrated flood early-warning systems that combine scientific modeling with governance and preparedness. The project moved beyond technological transfer, strengthening local decision-making and enabling timely evacuation before disaster strikes.

Closer to home, NTU's long-term collaboration with the Seediq community has helped reframe their traditional weaving as a living cultural practice that sustains intergenerational knowledge. Meanwhile, NTU's Positive Interpersonal & Life Orientation Training (PILOT) Program extends research-based interventions into schools nationwide, with empirical evidence indicating improvements in children's and adolescents' psychological resilience and well-being.

Together, these efforts affirm higher education as a force that shapes society through knowledge embedded in lived realities and sustained, responsible actions.



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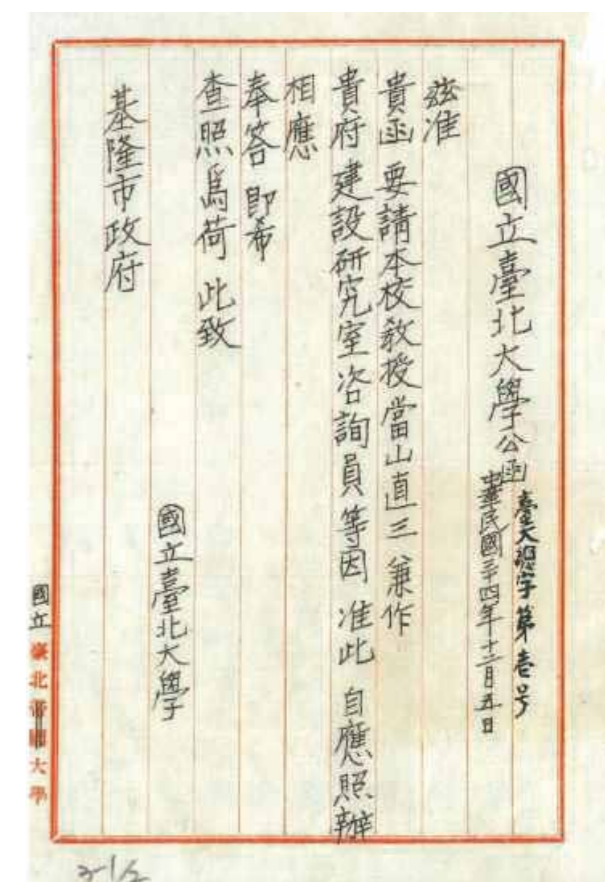
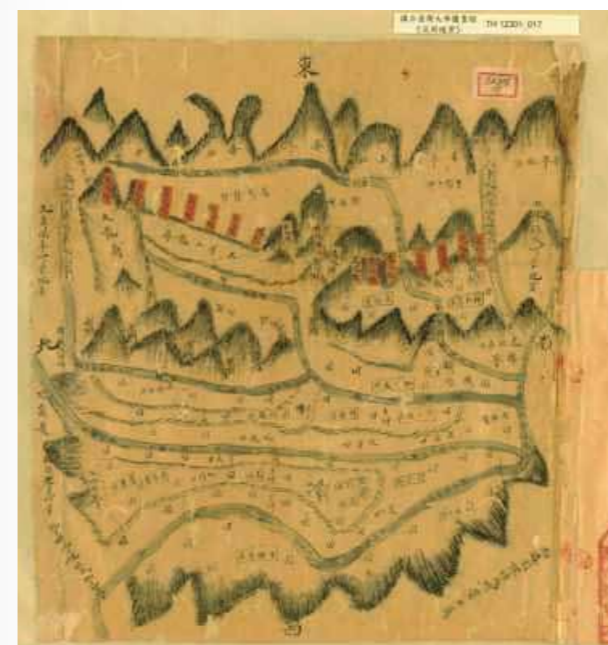
Since its founding in 1928, NTU has collected invaluable documents and artifacts from Taiwan, China and the South Seas, preserving them across specialized collections and galleries that serve as essential teaching and research resources. Key institutions include the NTU Library, Museum of Medical Humanities, History Gallery and Archives, each offering unique collections and opportunities for understanding our past.

The NTU Library houses over 250,000 rare books and Taiwan-related archives, spanning Chinese, Japanese, Western and contemporary manuscripts. Its special collections, exhibitions and digitization efforts ensure preservation and wider general and academic access.

The Museum of Medical Humanities preserves its late Renaissance architecture and highlights Taiwan's medical history. A notable work, "The Statue of a Doctor" by Dr. Wen-Hsiung Chiu, depicts a rural doctor caring for a sick child, symbolizing empathy and compassion in medical practice.

The NTU History Gallery displays over 1,000 cultural assets, including alumni notebooks, photographs and historical certificates, acting as a time capsule that preserves the NTU spirit for the coming generations.

The NTU Archives has safeguarded over two million official documents since 1945. With climate-controlled storage, restoration support, exhibitions and guided tours, the Archives highlights the University's rich historical and cultural legacy.



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# HIDDEN TREASURES: RARE COLLECTIONS ON THE NTU CAMPUS

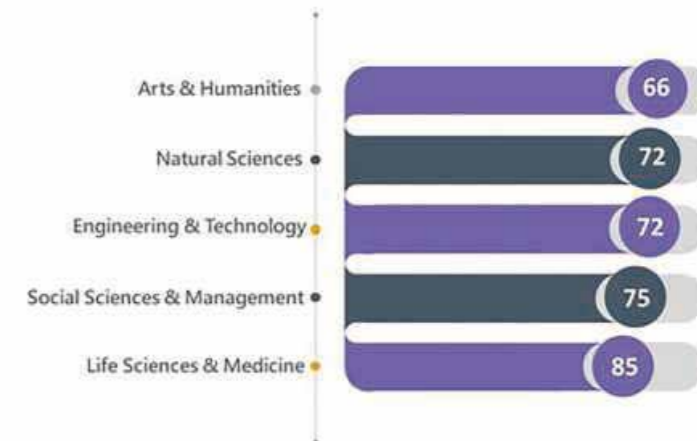
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Urbana-Champaign, as well as with the University of Tsukuba and Grenoble Alpes University. At the undergraduate level, NTU encourages early involvement in research through the Bachelor's Thesis Award. Recipients receive certificates and financial scholarships in recognition of their outstanding achievement. NTU is committed to expanding its international influence, nurturing research talent and driving knowledge innovation to create a lasting impact on academia and society.



# BREAKING BOUNDARIES: NTU CREATES INFINITE ACADEMIC POSSIBILITIES

In the 2024 QS World University Rankings by Subject, NTU ranked within the global top 100 across five major academic disciplines: engineering and technology, natural sciences, social sciences and management, life sciences and medicine, and arts and humanities. The Office of Research and Development strengthens NTU's research capacity by supporting faculty through funding programs, allocating resources and enhancing infrastructure. It also supports

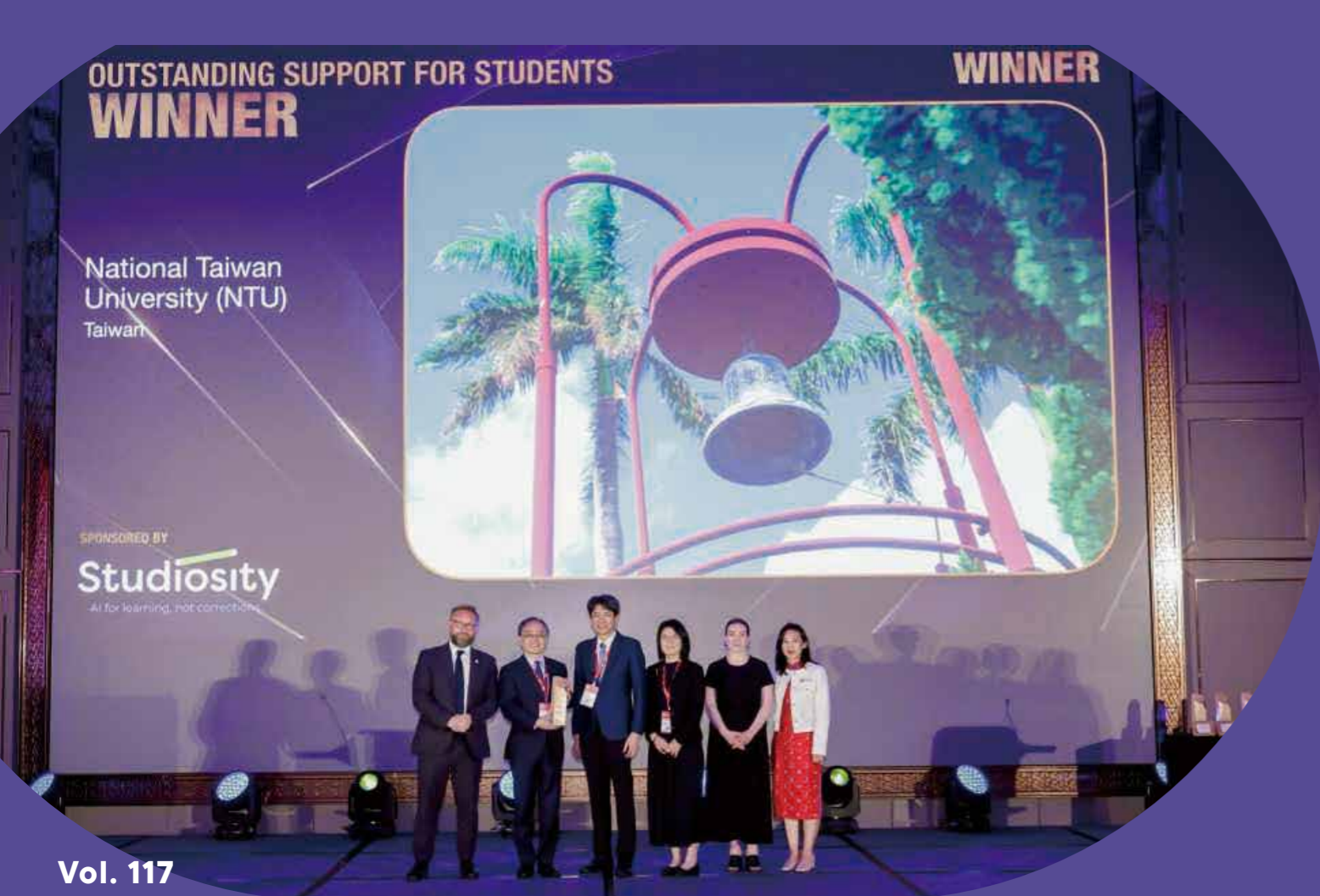
interdisciplinary and international collaborations and manages key research facilities and equipment, fostering innovation and social impact.

Building on its global engagement, NTU continues to deepen cooperation with leading global institutions to promote cross-border research and sustainable development. In 2024, NTU launched trilateral centers with Kyushu University and the University of Illinois



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# OPEN MAJOR AT NTU: EXPANDING INTERDISCIPLINARY LEARNING

To realize its vision of a learner-centered open university, NTU brought together academic and administrative resources to develop the Illuminating, Navigating and Transforming (INT) system. By combining academic advising, modular curricula and student-designed degrees, the INT system supports students in exploring across disciplines and designing self-directed learning pathways.



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The INT system serves as the foundation for NTU's Open Major framework. Among its key components, the University Interdisciplinary Bachelor's Program (UIBP), launched in 2021, enables students from any NTU college to design cross-college and interdisciplinary study plans aligned with their interests and career goals. Students can build their own degrees by selecting from more than 280 Specialization Programs, modular curricula structured around specific learning objectives. The Trans-disciplinary Bachelor Degree Program (TBD), introduced in 2022, complements this framework by cultivating creativity and innovative thinking that transcend conventional disciplinary boundaries.

The Open Major at NTU continues to expand its influence. As of 2025, 143 students have been admitted to the UIBP and 63 to the TBD. In 2024,

inspired by NTU's model, Taiwan's Ministry of Education introduced the Cross-Disciplinary Degree Initiative, extending this approach to eight universities nationwide. The INT system has also garnered international recognition, winning the Outstanding Support for Students award at the Times Higher Education Awards Asia 2025, highlighting NTU's leadership and forward-looking vision in advancing higher education innovation.

- 01 UIBP Students Activities
- 02 High school students actively inquire about UIBP opportunities at the NTU Azalea Festival.
- 03 The NTU Academic Advising Team leverages professional expertise and skills to help students clarify their goals and achieve personalized academic development.
- 04 TBD Students Activities



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02



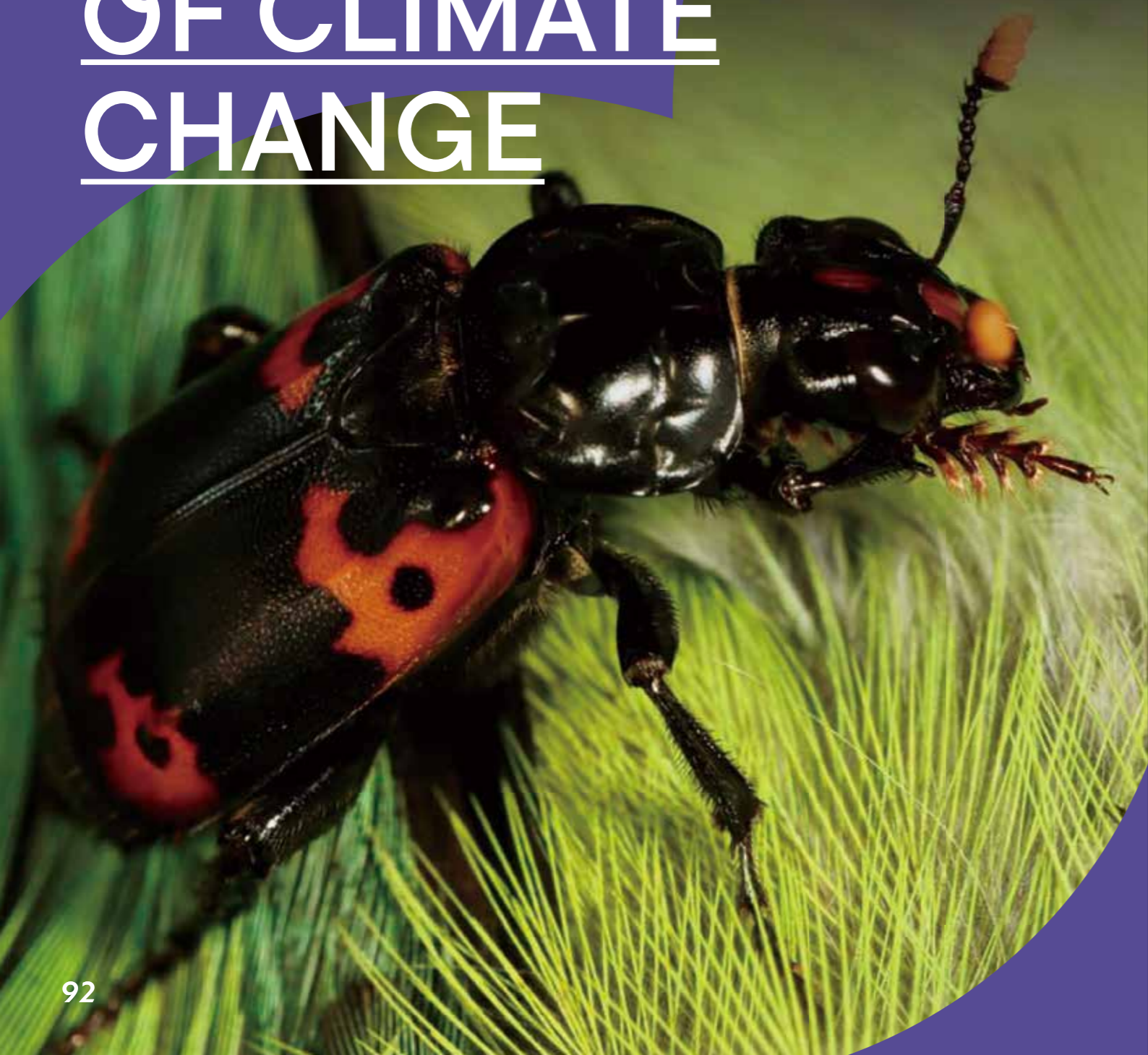
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# PAST, PRESENT AND FUTURE IMPACTS OF CLIMATE CHANGE

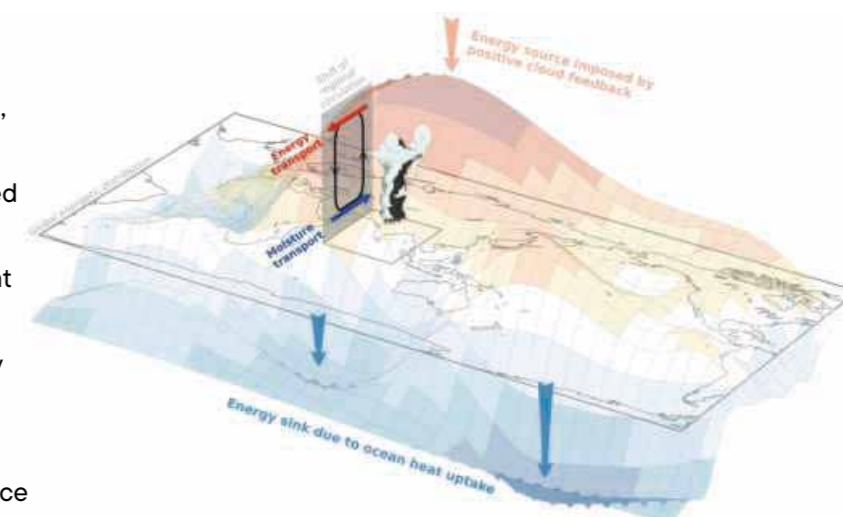


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Beyond physical science, NTU addresses climate impacts on society and ecosystems. Ecological studies on burying beetles revealed how rising temperatures disrupt biodiversity and essential ecosystem functions. Its researchers are also examining how extreme weather and natural disasters affect vulnerable communities and exploring effective adaptation strategies, such as shifting agricultural practices to confront these increasingly volatile challenges.

This issue of NTU Highlights explores climate change as an urgent and multifaceted global crisis, explaining how human activities have accelerated warming, intensified extreme weather and disrupted ecosystems. Combating climate change, NTU faculty explore key phenomena such as ocean heat absorption, Arctic amplification and the increasing severity of climate extremes. Their interdisciplinary approach, combining atmospheric science, social analysis and ecology, helps to understand climate change and develop practical solutions for resilience and sustainability.



NTU researchers are improving regional climate prediction by studying ocean circulation and its influence on weather, helping societies better prepare for future changes. They are also using high-resolution climate models to more accurately project typhoon intensity and frequency, which is critical for disaster preparedness in the Asia-Pacific region. In addition, NTU's work on Arctic climate processes is advancing understanding of feedback mechanisms that accelerate warming.





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# SOCIAL SCIENCES RESEARCH AND INTERNATIONAL DIALOGUE IN A CHANGING GLOBAL LANDSCAPE

The 2025 Empirical Studies of Conflict (ESOC) Research and Policy Conference was a landmark event that brought global expertise in conflict studies to Taipei for the first time. Hosted by NTU's College of Social Sciences in June 2025, the conference gathered leading academics, experts and policymakers from 12 regions to address pressing issues such as political violence, governance and regional security challenges. Participants examined conflict dynamics and policy responses, with a strong emphasis on causal analysis and cross-national comparison.

The conference strengthened NTU's global academic presence and positioned it as a hub for geopolitical and policy research in Asia. It facilitated interdisciplinary exchange among political scientists, economists and conflict researchers, advancing both individual research and collaborations. Panels on cyber warfare, energy dependence, diplomatic sanctions and the semiconductor industry connected academic findings to real-world strategic concerns.

Distinguished speakers, including Nobel laureate Roger Myerson, contributed theoretical and practical insights, particularly on governance and conflict stabilization. The conference also bridged academia and policymaking by engaging think tanks and international organizations, helping translate research into actionable strategies. ESOC enhanced Taiwan's visibility in global security discourse, strengthened international academic networks and promoted evidence-based approaches to addressing complex conflict and security challenges.



QR CODE LINK FOR MORE INFO



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