



CHAMPIONING

SUSTAINABILITY

推動可持續發展

Leadership for Global Change

As the world grapples with the escalating challenges of climate change and social inequality, we reflect on 2024/25 in terms of our solid commitment to the United Nations' Sustainable Development Goals (SDGs).

引領全球變革

全球致力應對氣候變化和社會不平等日益嚴峻的問題。回顧2024/25年度，城大全力推動聯合國可持續發展目標。

CHAMPIONING SUSTAINABILITY

推動可持續發展

#1
in Hong Kong
全港第一



Nature Index 2025 Energy Supplement

- Leading 200 Institutions
- Top 50 Rising Institutions

《2025年自然指數－能源》增刊

- 全球200所頂尖科研機構
- 全球50所快速發展機構



International Recognition

UNESCO has endorsed the "Fostering Innovation for Resilience and Sustainable Transformation" (FIRST) programme, spearheaded by CityUHK. FIRST is an initiative under the UN International Decade of Sciences for Sustainable Development (2024-2033).

FIRST will develop affordable technologies in collaboration with global partners from over 16 countries or regions to enhance sustainability and improve quality of life, particularly in underserved regions. This initiative is crucial for combating rising temperatures, biodiversity threats, energy disparities, and water scarcity. These innovations are aligned with key SDGs, including clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), sustainable cities and communities (SDG 11), and climate action (SDG 13).

國際認可

由城大統籌的「創新驅動可持續未來：先導計劃」（簡稱FIRST），獲聯合國教科文組織支持，並獲納入「聯合國科學促進可持續發展國際十年（2024-2033）」行動計劃。

透過此項先導計劃，城大將聯同來自逾16個國家或地區的全球合作夥伴，共同研發可負擔的創新技術，關注資源匱乏地區，以促進全球可持續發展和改善當地居民的生活質素。計劃將聚焦應對氣溫上升、生物多樣性流失、能源分配不均及水資源短缺等關鍵問題，與多項可持續發展目標相互呼應，包括可持續發展目標6（清潔食水和衛生設施）、可持續發展目標7（經濟適用的清潔能源）、可持續發展目標11（可持續城市和社區）以及可持續發展目標13（氣候行動）。

Cross-disciplinary CityUHK Scholars in the FIRST Team 參與FIRST先導計劃的城大跨學科團隊



Professor Benjamin Horton
Dean, School of Energy and Environment (SEE)

Benjamin Horton教授
能源及環境學院院長



Professor Edwin Tso Chi-yan
Associate Dean (Internationalisation and Outreach), SEE and FIRST Programme Director

曹之胤教授
能源及環境學院副院長（國際事務及拓展）兼先導計劃總監



Professor Yuan Zhiguo
Chair Professor of Urban Water Management, SEE

袁志國教授
能源及環境學院講座教授（城市水資源管理）



Professor Charles Xu Chunbao
Chair Professor of Advanced Biorefinery, SEE

徐春保教授
能源及環境學院講座教授（先進生物精煉）



Professor Carol Lin Sze-ki
Professor, SEE

連思琪教授
能源及環境學院教授



Professor Angus Yip Hin-lap
Associate Director, Hong Kong Institute for Clean Energy

葉軒立教授
香港清潔能源研究院副院長



Professor Julie Li Juan
Chair Professor, Department of Marketing

李娟教授
市場營銷學系講座教授



Professor Alex Jen Kwan-yue
Chair Professor of Chemistry and Materials Science, Department of Materials Science and Engineering

任廣禹教授
材料科學及工程學系講座教授（化學及材料科學）



To learn more
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CHAMPIONING SUSTAINABILITY 推動可持續發展

A CityUHK delegation connects with top institutions in Türkiye and introduces the UNESCO-endorsed FIRST programme at GSDC 2025.

城大代表團出席「全球可持續發展峰會2025」，與土耳其知名學府建立連繫，並闡述獲聯合國教科文組織支持的FIRST先導計劃。



The University was honoured to serve as the sole Green Innovation Partner for the second consecutive year at the Global Sustainable Development Congress (GSDC) 2025, which convened in Istanbul, Türkiye from 16 to 19 June. Demonstrating a pivotal leadership role at this international forum, CityUHK spearheaded the first official session, sharing insights on how to tackle the world's most pressing environmental issues.

In November 2024, CityUHK signed a Memorandum of Understanding (MoU) with the United Nations Trade and Development (UNCTAD) at the United Nations Framework Convention on Climate Change (COP29) in Baku, Azerbaijan. The MoU aims to promote sustainable development in the Asia-Pacific region and the rest of the world.

城大連續兩年擔任全球可持續發展峰會的唯一綠色創新合作夥伴。「全球可持續發展峰會2025」於6月16日至19日在土耳其伊斯坦堡舉行。城大在是次國際盛會中發揮關鍵的領導作用，主持首場官方會議，分享應對全球最具挑戰性的環境議題方面的真知灼見。

此外，城大於2024年11月參與在阿塞拜疆巴庫舉行的《聯合國氣候變化框架公約》締約方大會第29屆會議 (COP29)，並於會上與聯合國貿易和發展 (UNCTAD) 簽署合作備忘錄，推動亞太及全球可持續發展。



His Excellency Mr Ban Ki-moon, 8th Secretary-General of the UN and President of the Assembly and Chair of the Council of the Global Green Growth Institute, delivered a speech at the 15th Anniversary Symposium on Global Sustainability and Energy Innovation, organised by SEE.

能源及環境學院15周年：「全球可持續發展與能源創新研討會」，邀得聯合國第八任秘書長、全球綠色成長研究所大會主席及理事會主席潘基文先生閣下蒞臨城大主講。

Celebrating its 15th anniversary in 2025, SEE is now a globally renowned leader in sustainability science and technology. Due to its outstanding performance in SDG 7 (affordable and clean energy), *Nature Index 2025 Energy Supplement* ranked CityUHK an impressive 25th globally among the Leading 200 Institutions, 9th among the Top 50 Rising Institutions, and 1st in Hong Kong in both categories.

CityUHK ranked 234th globally and 28th in Asia in the QS World University Rankings: Sustainability 2025, particularly excelling in "Environmental Research", where it ranked 8th in Asia. This reflects our expertise in these areas.

2025年是城大能源及環境學院慶祝成立15周年，學院在引領全球可持續發展的科研方面享負盛譽，其中在可持續發展目標7（經濟適用的清潔能源）相關的研究表現卓越。在《2025年自然指數—能源》增刊中，城大於「全球200所頂尖科研機構」位列第25名，並在「全球50所快速發展機構」中高踞第九，兩項排名均位列全港第一。

城大在QS可持續發展大學排名2025中，全球排名第234，亞洲排名第28，其中在「環境研究」方面位列亞洲第八，印證了城大在相關領域的卓越表現。



A team led by Professor Alex Jen Kwan-yue (centre) has developed a new type of perovskite solar cells that can be mass-produced at speeds comparable to newspaper printing, achieving a daily output of up to 1,000 solar panels.

由任廣禹教授(中)領導的團隊，成功研發可批量生產的新型鈣鈦礦太陽能電池，速度媲美印刷報紙，每日產量可高達1,000塊太陽能板。

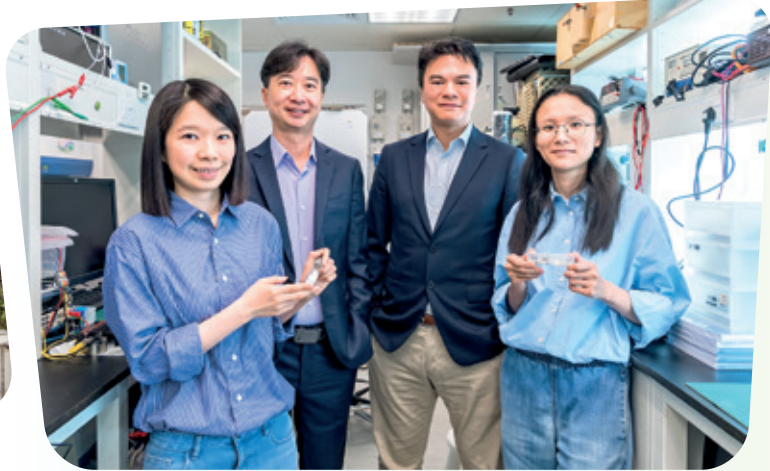
Innovative Research, Pioneering a Green Future

As global demand for renewable energy continues to rise, researchers at CityUHK have made a groundbreaking advancement in the development of a living passivator for perovskite solar cells. This innovative discovery has the potential to transform the renewable energy landscape by creating new pathways for more efficient and durable solar power technologies. The findings were published in *Nature* under the title "Water- and Heat-Activated Dynamic Passivation for Perovskite Photovoltaics".

Additionally, a novel fabrication technique is being developed to significantly enhance the commercialisation prospects of perovskite solar cells. This technique aims to improve stability, reliability, efficiency, and affordability. Published in *Science*, the research is noteworthy because the simple device structure created by the CityUHK team can facilitate future industrial production and enhance confidence in the commercialisation of perovskite solar cells.

Under the leadership of Professor Feng Shien-ping (2nd from left), a novel living passivator developed by his team, in collaboration with Professor Angus Yip Hin-lap (2nd from right), greatly enhances the performance of perovskite solar cells.

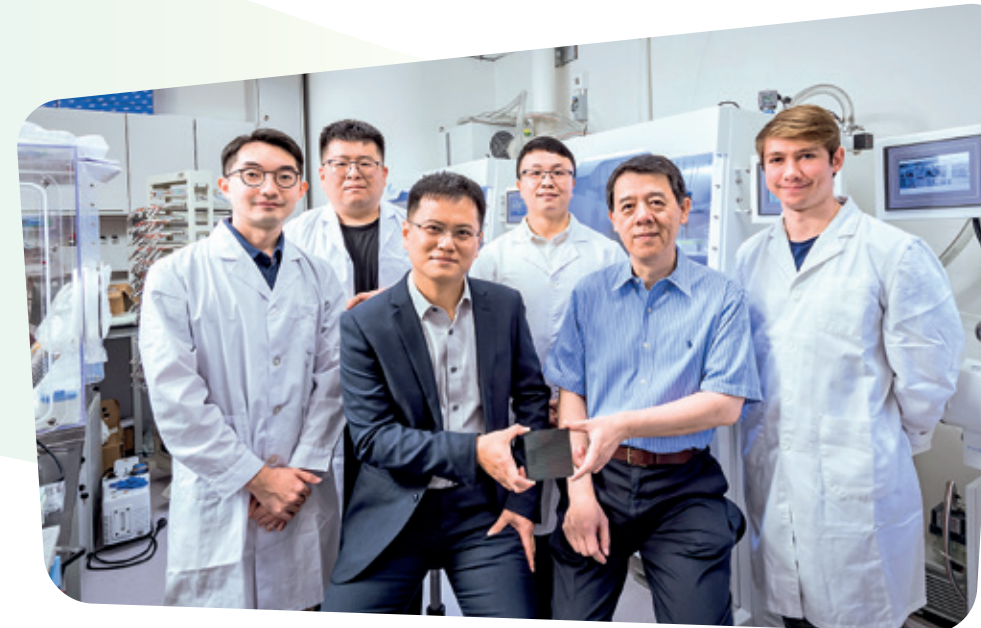
由馮憲平教授(左二)領導的團隊，與葉軒立教授(右二)合作，研發出新型動態鈍化劑，大幅提升鈣鈦礦太陽能電池的效能。



創新科研 引領綠色未來

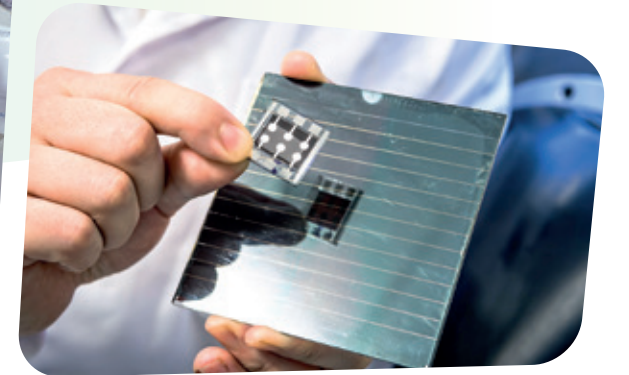
隨着全球對可再生能源的需求持續增長，城大研究人員成功研發出嶄新的動態鈍化劑，為鈣鈦礦太陽能電池的技術帶來重大突破，並有望透過開闢新途徑，引入更具效能、更耐用的太陽能技術，引領可再生能源領域的創新發展。有關研發成果在《自然》期刊發表，題為「用於鈣鈦礦太陽能電池的水和熱激活的動態鈍化劑」。

嶄新的器件結構和製備方案亦可大幅提升鈣鈦礦太陽能電池的穩定性、可靠性和效率，並可降低成本，令相關電池的商用前景更為廣闊。這項於《科學》期刊發表的研究極其重要，因為城大團隊設計的簡化器件結構有助促進未來鈣鈦礦太陽能電池的工業生產，提升業界將這類電池作商業用途的信心。



(Front row, from left) Professor Zhu Zonglong and Professor Zeng Xiaocheng hold their innovative solar cells, which can turn sunlight into electricity more efficiently.

(前排左起) 朱宗龍教授與曾曉成教授手持他們研發的創新太陽能電池，能更有效將陽光轉化為電能。



CityUHK scientists have also announced an exciting breakthrough in photovoltaic energy research—the development of highly efficient, printable, and stable perovskite solar cells that can be mass-produced at speeds comparable to newspaper printing. This research was published in *Nature Energy*.

The JC STEM Lab of Innovative Thermo-Fluid Science, supported by a generous donation from The Hong Kong Jockey Club Charities Trust, was another milestone event in the battle to enhance zero-carbon direct emissions nuclear energy research and nuclear safety.

Two CityUHK scholars were honoured with the BOCHK Science and Technology Innovation Prize 2024 for their outstanding contributions in the fields of new materials, new energy and financial technology. One of the two, Professor Zhang Hua, was also successful in securing the Croucher Fellowship in recognition of his contributions in the field of nanomaterials.

此外，城大科學家在太陽能技術上取得重大突破，成功開發出高效、可印刷且穩定的鈣鈦礦太陽能電池，其生產速度可媲美報紙印刷，並已在《自然能源》期刊發表。

城大並獲香港賽馬會慈善信託基金資助，成立全港首創的賽馬會「熱流科學」創科實驗室，是另一重要的里程碑，有助加強零碳排放的核能研究，提升核電安全。

城大兩位學者因其在新材料與新能源及金融科技方面的傑出貢獻，榮獲「中銀香港科技創新獎2024」，其中張華教授更獲裘槎基金會資助，表彰其在納米材料領域的貢獻。

13

CLIMATE ACTION



In January 2025, CityUHK and CLP Power Hong Kong Limited co-organised an international conference, "Powering a Carbon Neutral Future – The Role of Nuclear Energy", highlighting Hong Kong's role as a "super-connector".

在可持續發展目標13（氣候行動）方面，城大與中華電力有限公司於2025年1月合辦「核能在邁向碳中和未來的角色」國際研討會，發揮香港「超級聯繫人」角色。



14

LIFE BELOW WATER



The State Key Laboratory of Marine Environmental Health (SKLMEH) received the 2024 Dayu Water Conservancy Science and Technology Progress Award (2nd Class) for their project on increasing marine biodiversity of artificial seawalls by developing engineered eco-wall features. The project was led by Professor Kenneth Leung Mei-yee, Director of SKLMEH.

在可持續發展目標14（水下生物）方面，城大海洋環境健康全國重點實驗室參與的項目，榮獲2024年度全國大禹水利科技進步二等獎，其生態工程組件有助提升人造海堤的生物多樣性。該項目由實驗室主任梁美儀教授帶領進行。



11

SUSTAINABLE CITIES AND COMMUNITIES



Professor Liew Kim-meow, Yeung Kin Man Chair Professor of Sustainable Engineering, became the first Asian recipient of the Carl-Zeiss-Humboldt Research Award for breaking new ground in sustainability research. His research includes developing green concrete that incorporates recycled and waste materials.

在可持續發展目標11（可持續城市及社區）方面，城大楊建文講座教授（可持續工程學）劉錦茂教授的可持續研究取得突破性成果，榮獲卡爾蔡司洪堡研究獎，成為首位獲此殊榮的亞洲學者。他的研究涵蓋利用廢棄物循環再造綠色混凝土。



10

REDUCED INEQUALITIES



Professor Zhang Lin and his team revealed that transitioning to clean cooking fuels can significantly improve public health, save billions of US dollars nationwide in medical expenses annually, and hence improve income inequality.

在可持續發展目標10（減少不平等）方面，張林教授及其團隊發現轉用清潔煮食燃料能顯著改善民眾健康，每年為全國節省數十億美元醫療開支，並改善收入不平等。



Through collaboration with different stakeholders, CityUHK will continue to leverage its academic strengths to combat the grand challenge of building a more sustainable world.

城大將繼續與各方通力合作，運用學術力量應對全球挑戰，共同推動全球可持續發展。