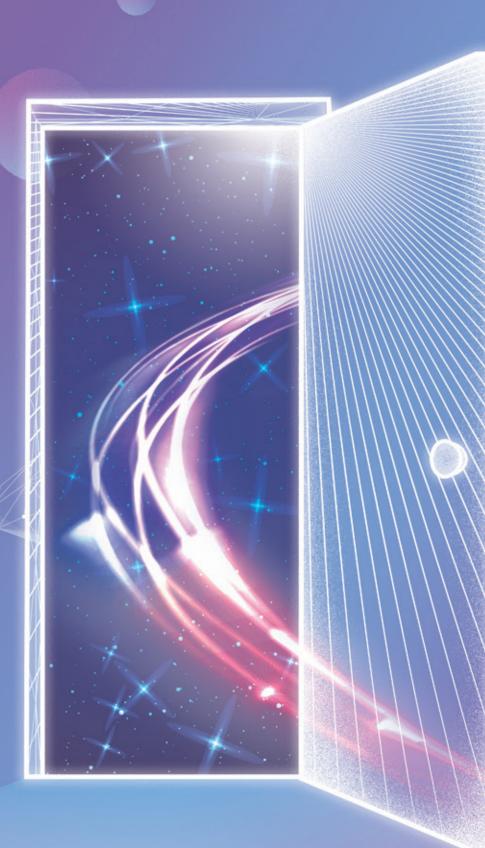
# 研究及發展

# LEADING RESEARCH ACROSS THE DISCIPLINES

# 領導跨學科研究

Our theme "Venturing Beyond Boundaries" relates closely to the exciting research agenda that City University of Hong Kong's (CityU) top-notch scholars have pursued in their interdisciplinary, internationally flavoured collaborative teams. They have rallied to the core idea of exploring beyond their comfort zone and discovering new knowledge to share with the rest of the world. Throughout the year, CityU has supported its researchers and worked to construct a holistic environment in which new knowledge can be created.

今年年報的主題「創科無限 引領未來」,與香港城市大學(城大)頂尖學者在跨學科、國際化協作團隊從事的卓越研究計劃密切相關。他們秉持核心理念,敢於突破,發現新知,並與全人類分享。過去一年,城大積極支持大學的研究人員,並努力營造有利於創造新知識的整體環境。



## Honouring excellence

2021/22 was an exceptionally bountiful year in terms of honours and awards with our faculty gaining widespread acclaim for their research.

In July 2021, two major pieces of news were received. First, Professor Dirk Pfeiffer, Chow Tak Fung Chair Professor of One Health and Director of the Centre for Applied One Health Research and Policy Advice, was selected for the prestigious Calvin W. Schwabe Award. Awarded by the Association for Veterinary Epidemiology and Preventive Medicine, this annual award honours Professor Pfeiffer's lifetime achievements in veterinary epidemiology and preventive medicine. Second, Dr Xu Wanghuai, a PhD graduate from the Department of Mechanical Engineering received the 2021 Materials Research Society Graduate Student Award (Silver) for his pioneering research on the development of a novel droplet-based electricity generator.

The European Academy of Sciences and Arts is a highly prestigious body to which Professor Sun Dong, Chair Professor of the Department of Biomedical Engineering, was elected later in the summer as a Member of the Technical and Environmental Sciences class. This honour reflects Professor Sun's pioneering studies on the robotic manipulation of biological cells and robot control.

Another august research institution is the US National Academy of Inventors to which Professor Yan Hong, Wong Chun Hong Professor of Data Engineering and Chair Professor in the Department of Electrical Engineering, was elected Fellow in December 2021 in recognition of his highly innovative work in advancing technological and economic developments.

### 廣獲榮譽

在2021/22學年,城大教員因其研究得到廣泛認 可,榮獲多項榮譽和獎項,成果豐碩。

2021年7月,城大收到兩則好消息。第一,周德豐 講座教授(健康一體化)兼健康一體化及政策應用 研究中心主任Dirk Pfeiffer教授獲頒享譽國際的 施瓦伯獎。獸醫流行病學和預防醫學協會頒授這一 年度殊榮予Pfeiffer教授,表彰其於獸醫流行病學和 預防醫學範疇的終身成就。第二,機械工程學系博 士畢業生徐王淮博士研究新型水滴發電機,憑此開 拓性研究榮獲2021年美國材料研究學會傑出研究 牛銀獎。

生物醫學工程學系講座教授孫東教授,膺選為歐洲 科學與人文學院院士,所屬學科組別為技術與環境 科學。這項榮譽表彰孫教授在機械人自動化操作生 物細胞領域的領先研究。

2021年12月,黃俊康教授(數據工程)兼電機工程 學系講座教授嚴洪教授,膺選為美國國家發明家科 學院院士,以表彰他促進科技及經濟發展的創新發

Professor Dirk Pfeiffer Dirk Pfeiffer教授



Professor Yan Hong 嚴洪教授

Later that month, Professor Kuo Tei-Wei, former Dean of the College of Engineering, was also elected as a Member of the European Academy of Sciences and Arts, this time in the Natural Sciences class.

In February 2022, two of our young scientists were shortlisted for MIT Technology Review Innovators Under 35 China. Dr Li Danfeng, Assistant Professor in the Department of Physics, and Dr Wang Cheng, Assistant Professor in the Department of Electrical Engineering, were the only two awardees in Hong Kong.

Energy and the environment continue to be priority areas, and so it was gladdening that Professor Wang Zuankai, Chair Professor in the Department of Mechanical Engineering and the Department of Materials Science and Engineering, was one of nine recipients in March 2022 to win the 2021 Green Tech Award organised by the Meituan Green Tech Fund.

The following month, Professor Xie Min, Chair Professor in the Department of Advanced Design and Systems Engineering and the School of Data Science, was also elected to the European Academy of Sciences and Arts in the Technical and Environmental Sciences class, as with Professor Sun Dong (above).

The field of circuits and systems within electrical engineering is very strong at CityU. Professor Michael Tse Chi-kong, Chair Professor of Electrical Engineering, was awarded the IEEE CASS Charles A. Desoer Technical Achievement Award 2022 in May 2022. Professor Tse is the first academic in China to win this award.

同在12月,前工學院院長郭大維教授膺選為歐洲 科學與人文學院院士,所屬學科組別為自然科學。

2022年2月,物理學系助理教授李丹楓博士、電機 獲美國麻省理工學院《麻省理工科技評論》雜誌選 為「中國區35歲以下發明家」,香港僅有這兩名學 者獲撰。

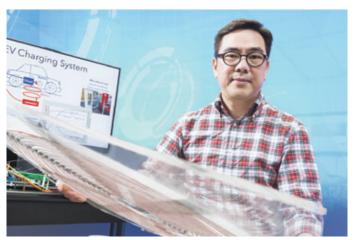
能源及環境是大學持續關注的重點領域。城大欣悉 機械工程學系和材料科學及工程學系講座教授 王鑽開教授在2022年3月榮獲美團青山科技基金頒 發2021年度青山科技獎,成為該獎項今年九位得 獎人之一。

2022年4月,先進設計及系統工程學系兼數據科學 學院講座教授謝旻教授繼孫東教授之後(見上), 亦膺選為歐洲科學與人文學院院士,所屬學科組別 同為技術與環境科學。

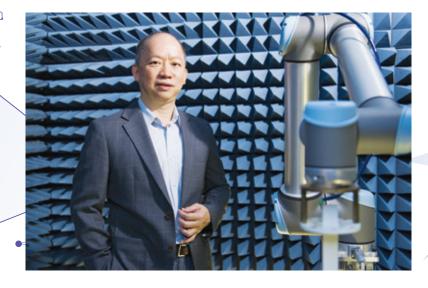
電機工程電路及系統是城大的擅長領域。2022年 5月, 電機工程學系講座教授謝智剛教授榮獲 2022年IEEE CASS Charles A. Desoer科技成就 獎,是中國首位學者獲此殊榮。

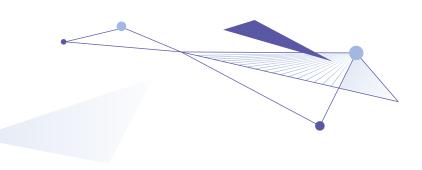


Professor Xie Min 謝旻教授



Professor Michael Tse Chi-kong 謝智剛教授





Professor Luk Kwai-man 陸貴文教授

Applied electromagnetics and antenna technology are also among the top-rated disciplines at CityU. Professor Luk Kwai-man, Chair Professor in the Department of Electrical Engineering, was conferred the 14th Guanghua Engineering Science and Technology Award by the Chinese Academy of Engineering in May 2022.

Professor Joe Qin Sizhao, Dean and Chair Professor of the School of Data Science and Director of the Hong Kong Institute of Data Science, received the 2022 CAST Computing in Chemical Engineering Award in June 2022. He was the first scholar educated in mainland China to be conferred such a highly significant award, one that endorsed our commitment to data science.

In June 2022, Chair Professor Sun Dong was honoured once more for his remarkable achievements in the field of advanced micro biomedical robots when he was elected as a Fellow of the International Academy of Medical and Biological Engineering.

The academic year ended on a high note when Dr Li Haoliang, Assistant Professor from the Department of Electrical Engineering, was named as one of the global Top 50 Chinese Young Scholars for his contributions to Al research.

電磁場學及天線技術亦是城大評價最高的學術領域之一。2022年5月,電機工程學系講座教授陸貴文教授榮獲中國工程院第十四屆光華工程科技獎。

數據科學學院院長兼數據科學講座教授、香港數據 科學研究院院長秦泗釗教授榮獲2022年美國化學 工程學會計算與系統技術部(CAST)計算與化學工程 獎,成為40多年來首位於中國內地受教育而獲頒 該獎項的學者。這項榮譽是對城大致力數據科學研 究的認可。

2022年6月,孫東講座教授再獲殊榮,膺選2022年 國際醫學與生物工程院院士,以表彰他在機械人學 及生物醫學工程的卓越成就。

本學年臨近結束時,又傳來喜訊。電機工程學系助理教授李皓亮博士膺選為全球頂尖50位華人青年學者之一,以表彰他為人工智能研究作出的貢獻。

### Funding success

The past academic year was especially fruitful in terms of successful funding applications, and CityU found itself well positioned, a true reflection of the quality of the outstanding research conducted at CityU.

#### Green Tech

It was very pleasing to learn in January 2022 that four research projects led by CityU scholars had received grants worth HK\$20.26 million in total from the inaugural Green Tech Fund, highlighting CityU's quality in scientific research and our commitment to developing innovative technology for environmental protection. In terms of the number of projects and the total amount of grants received, CityU earned the top position among all local universities.

#### Health and Medical Research Fund

CityU scholars received grants worth HK\$12.81 million in April 2022 from the Health and Medical Research Fund (2020/21 round) under the Food and Health Bureau, HKSAR Government, for projects that highlighted our commitment to pursuing research superiority and promoting interdisciplinary collaboration in One Health and life sciences.

#### Innovation and Technology Fund

Reflecting our drive to innovate in science and technology, CityU faculty secured 24 projects with over HK\$60 million in funding in May 2022 from the Innovation and Technology Fund (ITF), which is administered by the Innovation and Technology Commission, Hong Kong SAR Government.

### 成功爭取撥款

過去這一學年,城大獲得多項撥款,反映大學從事 的傑出研究質素之高,足證城大定位正確。

#### 低碳綠色科研基金

2022年1月,城大學者領導的四項研究獲環境保護署首屆「低碳綠色科研基金」撥款共2,026萬港元,令人欣喜。按項目數量和總資助金額,這項撥款均屬全港大學之冠,凸顯城大的科研實力超卓,致力開發創新環保技術。

#### 醫療衞生研究基金

2022年4月,城大學者獲香港特區政府食物及衞生局轄下醫療衞生研究基金(2020/21年度)撥款共1,281萬港元。獲資助的研究計劃展示城大在「健康一體化」及生命科學領域致力追求卓越、促進跨學科合作。

#### 創新及科技基金

2022年5月,城大教員獲香港特區政府創新科技署轄下創新及科技基金資助逾6,000萬港元,開展24個研究計劃,反映我們在科技領域勇於創新。



(From left) Professor Henry Chung Shu-hung, Professor Chan Chak-keung, Professor Alex Jen Kwan-yue and Professor Ng Yun-hau

(左起)鍾樹鴻教授、陳澤強教授、任廣 禹教授和吳永豪教授

## Fields of accomplishment

An enriched interdisciplinary mix of expertise on campus allows CityU to commit to a broad variety of research fields, all of which have a direct impact on improving people's lives.

#### Battling the pandemic

CityU scholars launched themselves into helping with the global effort to tackle the COVID-19 pandemic through research in several interdisciplinary fields.

In September 2021, Dr Steven Wang, Assistant Professor in the Department of Mechanical Engineering, introduced a new ventilation system that can quickly stop the spread of COVID-19 in the air at a low cost.

In October 2021, a research team led by Professor Frank Chen Youhua, Chair Professor of the Department of Management Sciences, suggested home-based healthcare services were urgently needed for senior citizens in Hong Kong who were more likely to experience physical and mental health problems.

In November 2021, a research team led by Dr Sean Yuan Hsiang-yu, Assistant Professor in the Department of Biomedical Sciences, announced it had developed the first mathematical model that takes variation in confirmation delay into account, making quantifying the impact of non-pharmaceutical interventions such as gathering bans more accurate.

### 研究成果橫跨多個領域

城大擁有實力雄厚的跨學科專家團隊,從事廣泛領 域的研究,為改善民生帶來直接影響。

#### 抗疫先鋒

城大學者在多個跨學科領域合作研究,協助全球抗 擊新冠疫情。

2021年9月,機械工程學系助理教授Steven Wang 博士研發快速通風系統,能以低成本方式在極短時間內阻止新冠病毒在空氣中擴散。

2021年10月,管理科學系講座教授陳友華教授領 導的研究團隊指出,本港長者在疫情期間較易出現 身心問題,須盡快為他們提供上門家居護理服務。

2021年11月,生物醫學系助理教授阮相宇博士領導的研究團隊公佈,成功開發首個將延遲確診作為變量因素納入計算的數學模型,能更準確地量化「限聚令」等非藥物干預措施的影響。



Professor Christine Huang Yi-hui (left) and Dr Vincent Wang Xiaohui 黃懿慧教授(左)和王小輝博士



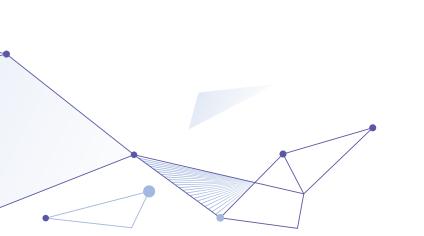
Inappropriate disposal of masks could cause microplastic pollution. 不當棄置外科口罩或會導致微塑料污染。

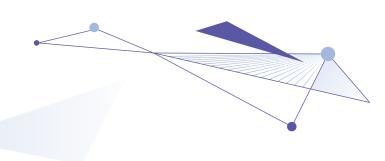
In terms of vaccinations, research by Professor Christine Huang Yi-hui, Chair Professor in the Department of Media and Communication (COM), and Dr Vincent Wang Xiaohui, Assistant Professor in COM, which was announced in December 2021, indicated that citizens' willingness to get the third jab and use the LeaveHomeSafe app varied significantly according to gender, age and education level.

Also in December 2021, researchers from the School of Energy and Environment, the State Key Laboratory of Marine Pollution and the Department of Chemistry revealed that inappropriate disposal of masks could cause microplastic pollution equivalent to polluting more than 54,800 swimming pools of seawater annually. The research was published in *Environmental Science and Technology Letters*.

在疫苗接種方面,媒體與傳播系講座教授黃懿慧教授及助理教授王小輝博士在2021年12月公佈一項調查結果,指出不同性別、年齡、教育程度的市民,對接種第三針新冠疫苗和使用「安心出行」的意願呈現顯著差異。

同在2021年12月,能源及環境學院及海洋污染國家重點實驗室的研究人員發現,若不當棄置外科口罩,或會導致微塑料污染,被污染的海水量每年可注滿超過54,800個奧運標準游泳池。研究成果發表於學術期刊《環境科學與技術通訊》。







/ Dr Sean Yuan Hsiang-yu 阮相宇博士



Correlation is found between weather conditions and lower Covid-19 fatality rates.

溫暖及潮濕環境與減低新冠病毒病死亡率有密切關係。

Dr Sean Yuan Hsiang-yu and his team announced in February 2022 that its estimation of the number of COVID-19 infections (250,000) in Hong Kong at the start of 2022 had been largely accurate.

Also in February 2022, using mathematical modelling once again, Dr Yuan revealed a correlation between the weather and humidity that patients are exposed to during different stages of COVID-19 infection and the probability of death.

Large-scale COVID-19 testing for small mammals was the focus of an exciting new partnership between CityU and the major global diagnostics and genetic testing company Prenetics starting in February 2022.

阮相宇博士及其團隊2022年2月公佈,此前對香港 在2022年初會有約25萬人感染新冠病毒的預測大 體準確。

同在2022年2月,阮博士以數學模型結合統計分析 推算出,新冠病毒病患者在不同感染階段接觸的氣 溫及相對濕度與其死亡率有關聯。

從2022年2月開始,城大與全球主要的基因及診斷 檢測公司Prenetics合作,為小型哺乳類動物推出大 規模新冠病毒檢測。 Using complex statistical formulations, Dr Zhang Qingpeng, Associate Professor in CityU's School of Data Science, explained in February 2022 that infection and mortality rates could be significantly reduced if high-income countries donated 46% of their COVID-19 vaccine stocks to low- and middle-income countries. The research findings were published in *Nature Human Behaviour*.

In March 2022, a team led by Dr Yu Xinge, Associate Professor in the Department of Biomedical Engineering, explained how their innovative human-machine interface could teleoperate robots to imitate the user's actions and perform complicated tasks, with potential for conducting COVID-19 swab tests and nursing patients with infectious diseases. The research was published in *Science Advances*.

In June 2022, a home-based intervention programme for managing chronic diseases that can reduce older people's sense of loneliness, which worsened significantly during the fifth wave of the COVID-19 pandemic, was introduced by Dr Dannii Yeung Yuen-lan, Associate Professor in the Department of Social and Behavioural Sciences, and Ms Hera Leung Hiu-wah, Project Manager in the Department of Management Sciences.

數據科學學院副教授張清鵬博士在2022年2月表示,研究團隊運用複雜的統計公式推算出,將高收入國家捐贈予中及低收入國家的新冠疫苗比例提高至46%,可大大降低中及低收入國家的新冠病毒病確診率和死亡率。有關研究成果於學術期刊《自然◆人類行為》上發表。

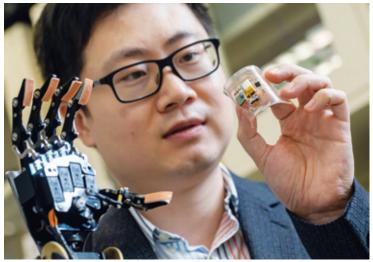
2022年3月,生物醫學工程學系副教授于欣格博士 及其團隊研發出一套嶄新人機介面操作系統,能遙 控機械人模仿人體動作來完成複雜任務,日後有望 執行新冠病毒測試採樣及遙距照顧傳染病患者。研 究成果刊登於學術期刊《科學進展》。

2022年6月,社會及行為科學系副教授楊婉蘭博士、管理科學系項目經理梁曉華女士帶領的團隊推廣一個上門慢性病管理計劃,有助減少長者的孤獨感。在第五波新冠疫情期間,長者感到孤獨的情況顯著惡化。



More vaccines re-allocated to low- and middle-income countries could reduce infection and mortality rates.

更多新冠疫苗贈予中及低收入國家可降低確診率及死亡率。



The innovative human-machine interface invented by Dr Yu Xinge and his team.

于欣格博士及其團隊研發出一套嶄新人機介面操作系統。

#### Healthy advances

Tackling the COVID-19 pandemic is just one area of health-related research that CityU pursues. Well-being at work and cell therapy are at the forefront of medical research today.

Dr Yang Zhengbao, Assistant Professor in the Department of Materials Science and Engineering and the Department of Mechanical Engineering, found out in September 2021 how joint disorders due to prolonged sitting at work can be prevented using a kirigami-structured sensor that can monitor joint movements when attached to the body. The research was published in *Science Advances*.

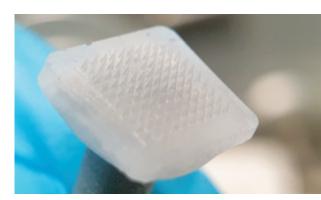
A team led by Dr Xu Chenjie, Associate Professor in the Department of Biomedical Engineering, introduced in September 2021 a new generation of microneedle patches made of ice that melt after the pain-free delivery of drugs, paving the way for developing an easy-to-use cell therapy and other therapeutics against cancers and other diseases. The research was published in *Nature Biomedical Engineering*.

#### 健康研究進展

應對新冠疫情僅是城大從事與健康相關的研究領域之一,員工的福祉及細胞療法等亦位於當今醫學研究前沿。

2021年9月,材料科學及工程學系與機械工程學系助理教授楊征保博士研發出一種剪紙結構的傳感器,與人體連接後能全面監測關節活動。研究成果在國際學術期刊《科學進展》上發表。

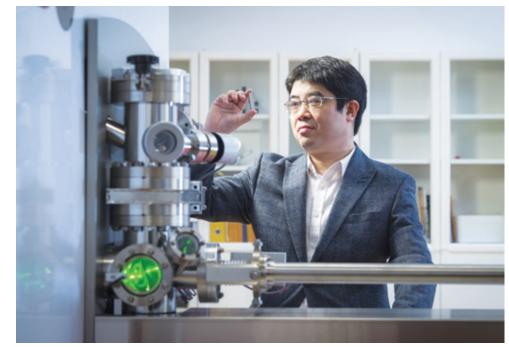
2021年9月,生物醫學工程學系副教授徐臣杰博士領導的團隊,研發出新一代冰製微針貼片。冰凍微針在病人皮膚內融解後傳送藥物,過程不會引致痛楚。這項新技術有望為日後研發易於使用、針對癌症等其他疾病的細胞療法和創新療法開闢新方向。研究成果於《自然·生物醫學工程》期刊發表。



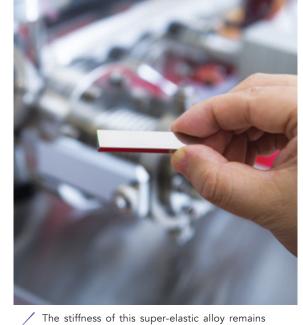
A new generation of icy microneedles patches 新一代冰製微針貼片



/ The kirigami-structure senor that can monitor joint movements when attached to the body. 與人體連接後的剪紙結構傳感器能全面監測關節活動。



/ Professor Yang Yong 楊勇教授



ine stiffness of this super-elastic alloy remainvariant to high temperature.
這種超彈性合金遇到高温仍能維持其剛度。

#### New allies in new alloys

Super-strong, highly ductile and ultra-light alloys are now possible thanks to the innovative use of additive manufacturing, or 3D printing, according to a materials research team led by Professor Liu Chain-tsuan, University Distinguished Professor in the College of Engineering. The project was published in *Science*.

In February 2022, a team led by Professor Yang Yong from the Department of Mechanical Engineering announced the discovery of a first-of-its-kind super-elastic alloy that can retain its stiffness even after being heated to 1,000K (about 727 °C) or above. The findings were published in *Nature*.

## Steering liquids

A study led by Professor Wang Zuankai, Chair Professor in the Department of Mechanical Engineering, showed that the spreading direction of different liquids deposited on the same surface can be steered, a challenge that had remained unsolved for over two centuries. The research was published in *Science*.

## 新型合金

工學院大學傑出教授劉錦川教授領導的研究團隊 以創新方式應用積層製造技術(亦稱3D打印技術),研製出超高強度、高韌度的極輕合金。論文 已於頂尖學術期刊《科學》上發表。

2022年2月,機械工程學系楊勇教授領導的研究團隊宣佈,首次發現了一種超彈性合金,被加熱至1,000K(約727°C)甚至更高溫之後仍能維持其剛度。研究成果已於學術期刊《自然》上發表。

#### 調控液體流向

機械工程學系講座教授王鑽開教授領導的研究團隊發現,不同液體在同一材料表面的流向是可調控的,解開兩個世紀以來一直懸而未決的謎題。研究成果於《科學》上發表。

#### Cooling breakthrough

Professor Wang Zuankai co-led another pioneering study, this time published in *Nature*, that presented a structured thermal armour that achieves efficient liquid cooling even over 1,000°C, fundamentally solving the Leidenfrost effect, which was first noted in 1756.

#### Solar cell success

Enhancing solar cell performance is vital for the development of sustainable energy. In April 2022, Dr Zhu Zonglong, Assistant Professor from the Department of Chemistry, announced that CityU was helping to accelerate the commercialisation of perovskite photovoltaic technology that boosts the efficiency of inverted perovskite solar cells to a record-high of 25%. The findings were published in *Science*.

#### Meta-lens for mega industry

Professor Tsai Din-ping, Chair Professor of the Department of Electrical Engineering (EE), and Dr Chen Mu-ku, Research Assistant Professor in EE, presented their novel vacuum ultra-violet meta-lens that is more compact, lightweight, and effective than conventional technologies and can be mass produced. The research was published in *Science Advances*.

#### 冷卻技術突破

王鑽開教授共同領導的團隊進行另一創新研究,研發出一種結構熱裝甲,能有效將液體冷卻的應用溫度提升至1,000°C以上,徹底解決1756年發現的萊頓弗羅斯特效應帶來的難題。這項研究成果發表在《自然》上。

#### 促進太陽能電池商業化

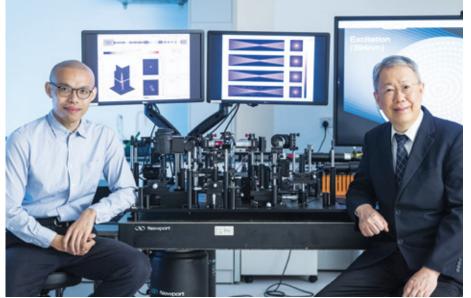
提升太陽能電池的性能是發展可持續能源的一大關鍵。2022年4月,化學系助理教授朱宗龍博士公佈,城大找出新方法,將反式鈣鈦礦太陽能電池的效率大幅提升至25%,有助促進鈣鈦礦太陽能電池商業化。研究成果已在《科學》上發表。

#### 超構透鏡

電機工程學系講座教授蔡定平教授及研究助理教授陳沐谷博士研發出一種新型真空紫外光超構透鏡,比傳統技術的成品更輕巧、更高效能,且可大量生產。研究成果已在《科學進展》刊載。



' Dr Zhu Zonglong (right) and his research team 朱宗龍博士(右)及其研究團隊



Professor Tsai Din-ping (right) and Dr Chen Mu-ku 蔡定平教授(右)和陳沐谷博士

## Recognising top scholars

The winner of the 2021 Outstanding Research Award was Professor Alex Jen Kwan-yue, Lee Shau Kee Chair Professor of Materials Science, while Outstanding Research Awards for Junior Faculty were awarded to Dr Kim Ki Joon, Associate Professor in the Department of Media and Communication, Dr Lei Dangyuan, Associate Professor in the Department of Materials Science and Engineering, Dr Yan Jian, Assistant Professor in the Department of Biomedical Sciences, and Dr Zhang Qingpeng, Associate Professor in the School of Data Science.

#### New research centres

The new Tung Biomedical Sciences Centre is dedicated to the development of novel diagnostic and therapeutic strategies for the prediction, prevention and treatment of cancers, neurodegeneration and infectious diseases. The Centre was named in honour of The Tung Foundation in appreciation of its Foundation's generous support at a ceremony in August 2021.

In December 2021, the Hong Kong Centre for Cerebro-Cardiovascular Health Engineering under Health@InnoHK, Centre for Intelligent Multidimensional Data Analysis, and the Laboratory for Al-Powered Financial Technologies under AlR@InnoHK were established under InnoHK, an initiative of the HKSAR Government.

## 表彰傑出學者

2021年「傑出研究獎」得主是李兆基講座教授(材料科學)任廣禹教授。「傑出研究獎 — 青年學者」得主是媒體與傳播系副教授Kim Ki Joon博士、材料科學及工程學系副教授雷黨願博士、生物醫學系助理教授嚴健博士、數據科學學院副教授張清鵬博士。

## 新研究中心

2021年8月,城大舉行「董氏生物醫學中心」命名典 禮。中心將致力研發創新診斷方式及療法,用來預 測、預防及治療癌症、神經退化及傳染病。該中心 以董氏慈善基金會命名,以感謝其慷慨支持。

2021年12月,城大在InnoHK下創立三所世界級研究中心,分別是Health@InnoHK創新平台轄下的香港心腦血管健康工程研究中心、AIR@InnoHK創新平台轄下的智能多維數據分析研究中心、人工智能金融科技實驗室。InnoHK是香港特區政府一項重要舉措。



Tung Biomedical Sciences Centre was named in honour of The Tung Foundation's generous support.

「董氏生物醫學中心」以董氏慈善基金會命名,以感謝其慷慨支持。

## Academic Publications by CityU Staff in 2021/22 2021/22年城大教職員的學術著作

Total number of books (including research books or monographs, textbooks, literary works and translations) authored by CityU staff

城大教職員的學術著作(包括研究書籍、課本、文學及翻譯作品)

47

Total number of research papers authored by CityU staff in peer-reviewed academic journals, externally refereed policy or professional journals worldwide:	
刊登在世界各地學術及專業期刊的城大教職員研究論文	5,166
Arts and Humanities 藝術及人文	288
Business and Economics 商業及經濟	260
Science (including Medicine) 科學(包括醫學)	4,217
Social Sciences (including Law) 社會科學(包括法律)	401

Figures as at end of June 2022.

數字以2022年6月底為準。

註:

## Ongoing Funded and Contract Research 2021/22 2021/22年度進行中的資助及合約研究

	Total Funding (million) 資助總額(百萬元)
Innovation and Technology Fund (ITF)¹ 創新及科技基金	399.781
Contract and privately/government-funded projects 業界贊助合約研究項目及政府資助研究項目	402.21

- Included are industry sponsorships for ITF projects and annual funding support from the Innovation and Technology Commission at \$10m each to the State Key Laboratory of Marine Pollution, State Key Laboratory of Terahertz and Millimeter Waves, and Hong Kong Branch of National Precious Metals Material Engineering Research Center.
- 包括業界對創新及科技基金研發項目的贊助,以及創新 科技署每年分別向海洋污染國家重點實驗室、太赫茲及 毫米波國家重點實驗室、國家貴金屬材料工程技術研究 中心香港分中心提供的1,000萬港元資助。

## Research Projects 2021/22 2021/22年度研究項目

Total number of ongoing research projects funded by external funds and CityU research grants 由校外及校內撥款資助的研究項目總數 3,396 Number of ongoing research projects by Colleges/Schools/support centres 各學院/學術支援部門的研究項目數目 College of Business 商學院 377 College of Engineering 工學院 1,305 College of Liberal Arts and Social Sciences 人文社會科學院 460 College of Science 理學院 471 Jockey Club College of Veterinary Medicine and Life Sciences 賽馬會動物醫學及生命科學院 371 School of Creative Media 創意媒體學院 74 School of Data Science 數據科學學院 80 School of Energy and Environment 能源及環境學院 187 School of Law 法律學院 Other Academic Supporting and Administrative Units 其他學術支援及行政部門

Including CityU-funded, RGC-funded and externally funded research projects, with 863 new start-ups in 2021/22. Figures as at end of June 2022.

註:

包括由城大、研究資助局及校外資助的研究項目,其中863項 是2021/22年度內新發展的項目。數字以2022年6月底為準。