

DRIVING INNOVATION FOR A BETTER FUTURE

創建美好將來

PolyU researchers are making high-impact contributions to sustainable development and the betterment of Hong Kong and the motherland.

理大科研人員一直致力為可持續發展和香港與祖國的福祉作出重要貢獻。

FUNDING FOR INNOVATIVE RESEARCH

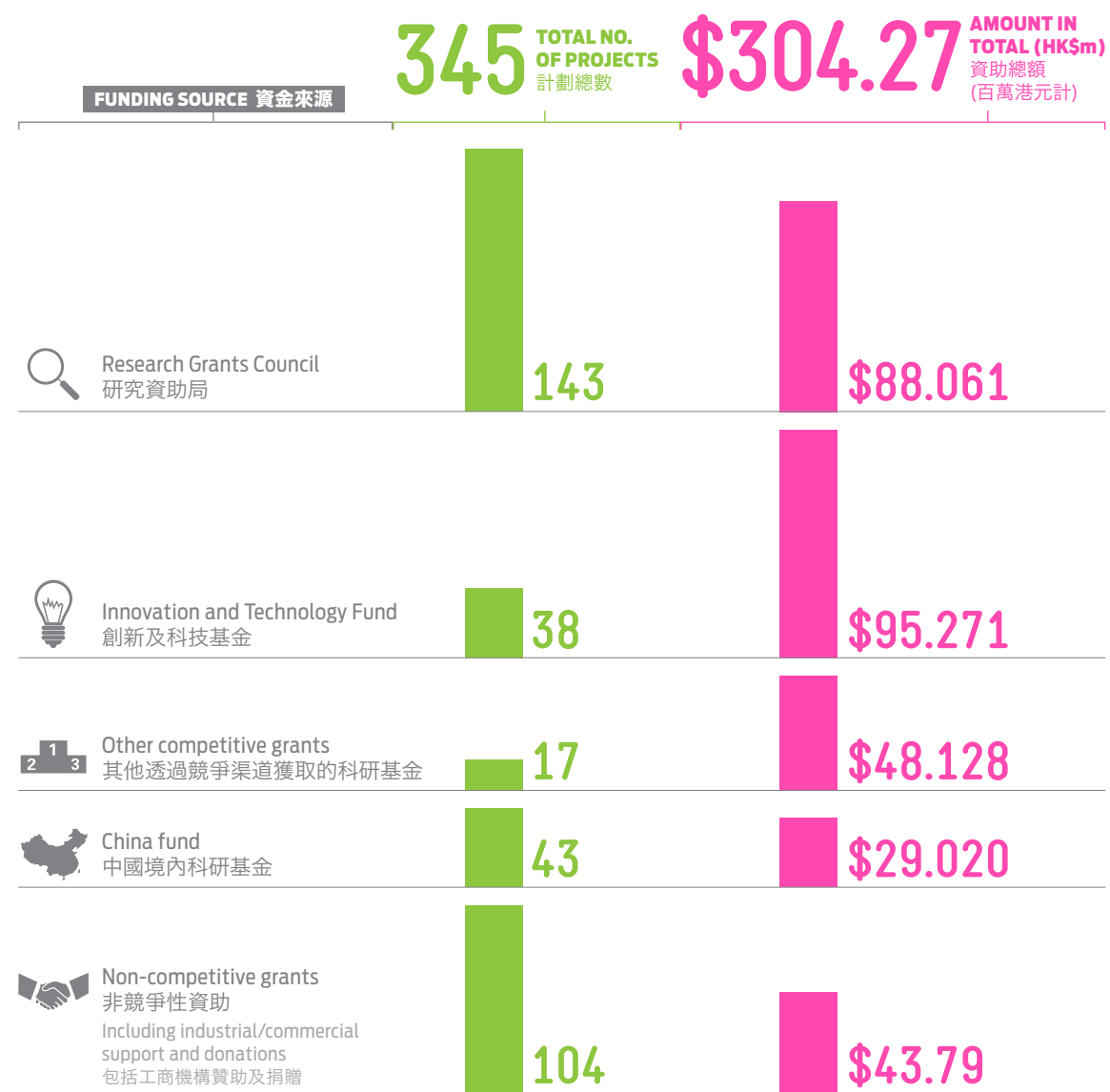
In 2012/13, the research project funding of PolyU totalled HK\$1,336 million, supporting more than 2,600 projects undertaken by more than 1,000 academic staff and some 1,000 research personnel. In addition to internal allocation, PolyU academics will apply for external funds, either through competitive means or non-competitive means, to support their research projects.

科研經費

二零一二至一三年度，理大科研計劃的總資金為十三億三千六百萬港元，科研計劃超過二千六百項，一千多名教學人員及約一千名科研人員參與其中。除校內科研基金之外，教學人員同時積極透過競爭或非競爭渠道，申請校外不同種類的資源，以資助科研項目。

NEWLY FUNDED PROJECTS IN 2012/13

2012/13 年度新科研計劃

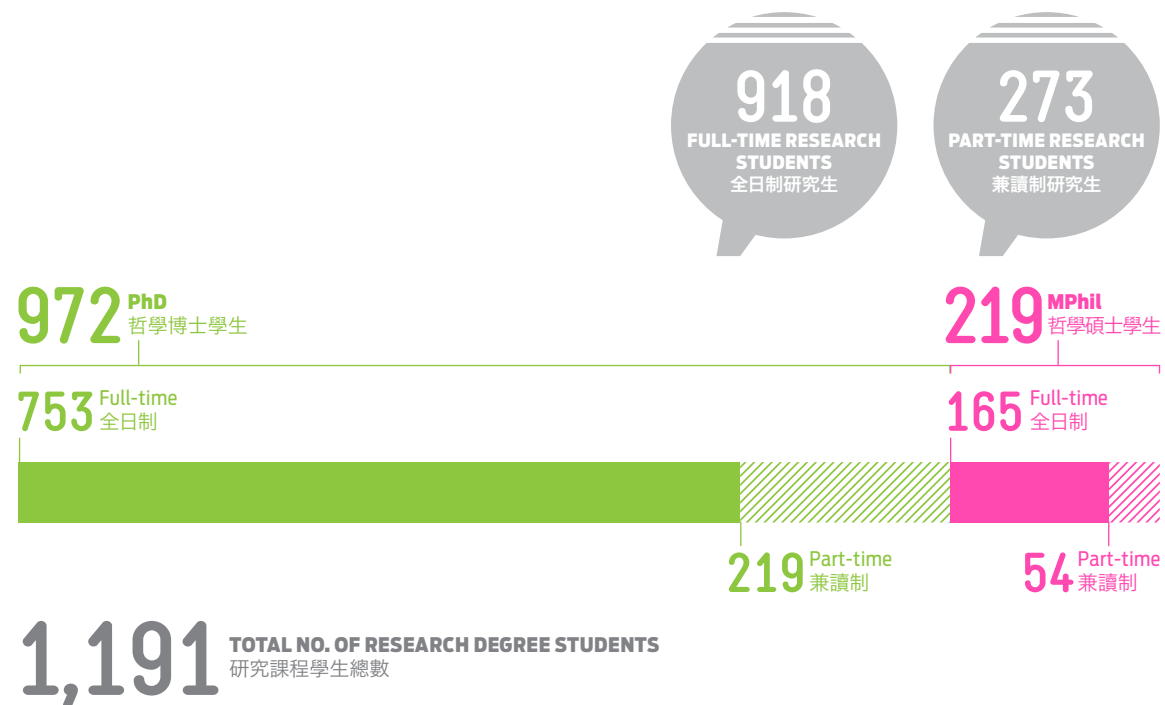


INSTITUTIONAL SUPPORT FOR RESEARCH AND DEVELOPMENT

During the year, the Innovation and Technology Development Office was established to support the advancement of major research and development initiatives with knowledge transfer potential, the management of intellectual property (IP) portfolio of the University, as well as the creation of new technology development and transfer opportunities through collaborative research. In addition, the Office has set up the Intellectual Property Assessment Committee with faculty members and representatives from business and industry. The Committee will conduct IP assessment and advise the University on IP matters, and unlock the commercial value of early stage inventions.

NO. OF RESEARCH STUDENTS 研究生人數

As of 30 June 2013, a total of 1,191 research degree students were engaged in the following courses of studies:

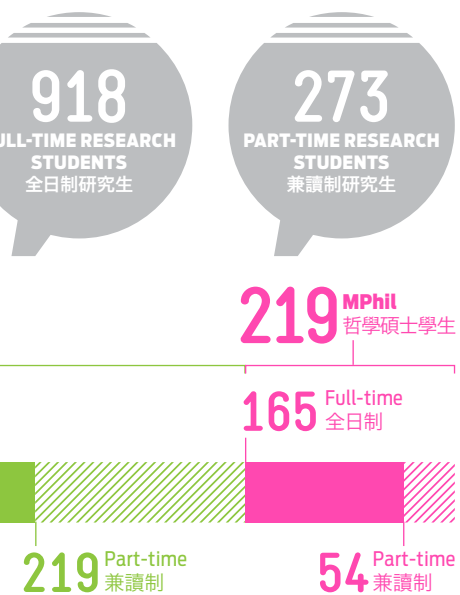


Altogether a total of 235 research students graduated in 2012/13, 165 of them PhD graduates and 70 MPhil graduates.

理大支援科研發展

年內，理大成立創新及科技發展處，旨在支援具知識轉移潛力的主要研發項目、管理大學的知識產權，以及透過推動合作研究，開拓科技發展和知識轉移的新機遇。此外，創新及科技發展處更成立了知識產權評估委員會，成員包括理大教研人員及工商業界人士。委員會將進行知識產權評估，並就知識產權管理提供建議，以發掘新發明的商業價值。

截至二零一三年六月三十日，共有一千一百九十一名學生供讀以下研究課程：



二零一二至一三年度共有二百三十五名研究生畢業，當中一百六十五名是哲學博士學生，七十名是哲學碩士學生。

MEETING CHALLENGES OF URBAN SUSTAINABILITY

To capitalize on the “living laboratory” of Hong Kong’s high-density urban environment and PolyU’s strong expertise in areas related to sustainable urban development, the University established the Research Institute for Sustainable Urban Development (RISUD) to promote and support multi-disciplinary research in the area.

Led by Director Prof. Teng Jin-guang, who is also Dean of the Faculty of Construction and Environment, and Associate Director Prof. Li Xiang-dong, the RISUD is organized into five Divisions: (1) Urban Planning and Management, (2) Urban Infrastructure, (3) Urban Environment, (4) Digital Technology in Urban Development, and (5) Building Energy and Environmental Performance.

The RISUD further includes 26 research groups, each led by an internationally recognized scholar in his/her field. Through research and knowledge transfer activities, consultancy services and professional training, the RISUD is committed to multi-disciplinary collaborations to address major urban planning and environmental issues. Putting research findings into practice by transferring the technologies that have been developed will enhance Hong Kong’s competitiveness as well as China’s socio-economic development.

Considerable progress has already been made by RISUD. Following its Inauguration Ceremony on 14 June 2013, RISUD organized five international workshops on building energy efficiency, regional air quality and waste management. RISUD has been actively exploring multi-disciplinary/group research opportunities with significant success. A major study led by Prof. Teng Jin-guang on the use of advanced composite materials to achieve high performance and longevity for major structures has been launched in collaboration with researchers at Tsinghua University and Tongji University. Funding of about HK\$6.2 million for this important study is being provided by the National Basic Research Programme, alternatively known as the 973 Programme. Furthermore, approval has been given for a major study with over HK\$6 million funded by the 973 Programme, to be led by Prof. Li Xiang-dong on soil pollution and remediation in collaboration with researchers from Zhejiang University, the Chinese Academy of Sciences and Peking University.

Since RISUD supports highly original ideas with high potential impact, it has launched a Blue-Sky Research Scheme. It has also formed the International Research network for Sustainable Urban Development with related research centres of leading universities such as the Delft University of Technology, Fudan University, South China University of Technology, University of California, Berkeley, the University of Leeds and the University of Texas at Austin.

迎接可持續城市發展的挑戰

理大成立「可持續城市發展研究院」，運用大學在相關領域的豐富專門知識，加上以香港這個高密度城市的切身經驗為本，推動跨學科研究。

可持續城市發展研究院由身兼建設及環境學院院長的滕錦光教授領導，副院長是李向東教授，全院共分五大分部：(一)城市規劃及管理；(二)城市基建；(三)城市環境；(四)城市發展與數碼技術；以及(五)建築能源及環境。

可持續城市發展研究院轄下共設有二十六個研究小組，各由一位在有關研究範疇具國際知名度的資深研究人員領導。透過研究和知識轉移活動、專業顧問服務及培訓工作，研究院致力推動跨學科合作，回應重要的城市規劃及環境議題。研究院亦致力將研究成果付諸實踐，從而為促進本港的競爭力及中國的社會經濟發展作出貢獻。

研究院已在多個範疇取得進展。自二零一三年六月十四日正式成立以來，研究院舉辦了五個國際研討會，內容有關建築節能、區域空氣質素及廢物管理。研究院一直積極探討多學科/合作研究項目，並已取得顯著成就。滕錦光教授帶領的團隊(包括清華大學和同濟大學的研究人員)獲得國家重點基礎研究發展計劃(973計劃)約為六百二十萬港元的資助，啟動了採用先進複合材料來提升結構性能及延長結構壽命的研究。此外，李向東教授帶領的團隊(包括浙江大學、中科院及北京大學的研究人員)獲另一個973計劃項目資助，研究經費超過六百萬港元，開展對土壤污染及其修復的研究。

此外，研究院設立了「藍天研究計劃」，專門資助可能在未來產生重要影響的基礎研究。研究院也建立了「可持續城市發展國際研究協作網」，成員包括以下大學的相關研究中心：代爾夫特理工大學、復旦大學、華南理工大學、加州大學柏克萊分校、利茲大學，以及德克薩斯州大學奧斯汀分校。

CONTRIBUTING TO NATIONAL DEVELOPMENT

In collaboration with mainland universities/institutions, PolyU participated in the following research projects, thereby contributing to various aspects of the nation's development.

Exploring Chinese herb for new drug development

Collaborating the efforts of eight State Key Laboratory Incubation Bases in China, this project of pharmacodynamics studies, as well as *in vitro* and *in vivo* pharmacokinetics study of the anti-osteoporotic herb, *Sambucus Williamsii* Hance, will elucidate the *in vivo* metabolic characteristics of the complex system of Chinese medicine, and to identify metabolites related to its efficacy.

Antimicrobial resistance in major animal pathogens

Bacterial antimicrobial resistance causes problems in aquaculture, food safety, public health and even in economy and trade, especially in the mainland. In consequence, a National Key Basic Research Plan has been launched to investigate the mechanisms of the development, transmission and control of antimicrobial resistance in animal pathogens for better surveillance, detection and risk management. The plan is sponsored by the State Ministry of Science and Technology and led by China Agricultural University, PolyU and four other mainland universities.

① High-performance acoustic functional materials

In collaboration with mainland academic experts in the field of acoustic functional materials and design of ultrasonic transducers, PolyU researchers are seeking to develop large-size PMN-PT and PIN-PMN-PT single crystals with uniform component, efficient, broad bandwidth acoustically transmission materials (transmission > 90%) and sound-absorbing material (absorption > 90%). This will enhance the international competitiveness of the nation's ultrasound equipment through the functional integration of high-end ultrasonic transducers (bandwidth > 110%).

Snapping bottleneck in computer data storage

Researchers at PolyU are investigating novel uniform memory/storage architectures and system software to rectify bottlenecks brought by the memory/storage hierarchy in computer systems. Emerging non-volatile memory such as Phase Change Memory provides opportunities to solve this problem with its advantages in performance, scalability and non-volatility. By integrating memory and storage, data transfer between CPU and memory/storage can be improved via high-speed memory bus.

貢獻國家發展

理大與內地大學及院校合作研究以下項目，為國家在不同範疇的發展出一分力。

研究中藥新發展

該項目由八家國家重點實驗室培育基地共同參與，針對中藥接骨木進行研究，通過藥效和體內、外藥代動力學研究，闡明中藥複雜體系在體內的代謝特徵，尋找與藥效相關的代謝物。

畜禽病原菌耐藥性的研究

病原菌耐藥的情況在養殖業、食品安全、公眾健康以至經濟貿易上都帶來問題，在中國內地尤其嚴重。因此，中國農業大學、理大和四所內地大學全面開展國家重點基礎研究計劃，針對畜禽病原菌耐藥性形成、傳播與控制等方面作研究，包括更佳的控制細菌耐藥性、提高畜禽病原菌耐藥性檢測，以及風險評估與控制。此計劃獲得國家科技部資助。

高性能聲功能材料

理大研究人員與內地聲功能材料和超聲換能器設計專家致力研製出大尺寸、組分均勻的PMN-PT和PIN-PMN-PT單晶以及高效、寬頻透聲(透聲率>90%)和吸聲(吸聲率>90%)的材料。通過功能集成製備出高端超聲換能器(頻寬>110%)，以提升國家超聲設備的國際競爭力。

解決電腦資料儲存樽頸問題

理大研究人員提出了基於新型非易失性記憶體的統一內外存系統結構及研究系統軟體的優化技術。新型非易失性記憶體在性能、密度、非易失性資料存儲等方面的特性可以突破傳統的內外存分離的存儲結構。通過將內外存結合，突破傳統內外存分離的結構，統一管理內外存與處理器之間經高速記憶體匯流排的資料傳輸，從而有效地提高資料存取速度。

Nanomaterials and devices for hydrogen detection

Hydrogen is considered an ideal clean fuel for future power supply. Consequently Dr Wang Yu, Associate Professor at the Department of Applied Physics, took part in the project titled "Development of Nanomaterials and Devices for Detection of Infrared Radiation and Hydrogen" in the mainland sponsored by the Ministry of Science and Technology of China. The project aims at developing functional nanomaterials to be used for detection of low-concentration hydrogen at room temperature.



氫氣探測用納米材料

氫被認為是一種理想的清潔能源，因此應用物理學系副教授王雨博士參與了一項由科技部資助、題為「高靈敏度紅外和氫氣探測用納米材料及器件研製」的研究。旨在研發可以用於室溫氫檢測的納米功能材料。



① An eight-element annular-array ultrasound transducer
八陣元環形陣超聲探頭

② Performing efficacy tests using a light integrating sphere and spectrometer
利用積分球及光譜分析儀進行二極管效能測試

FACILITATING THE BETTERMENT OF HONG KONG

The University's innovative research in the following projects contributed to making Hong Kong a better place to live.

Sustainable lighting technology

A research on Sustainable Lighting Technology at PolyU stresses energy saving, long product lifetime and recyclability of product materials. It involves an investigation into a new General LED System Theory for "multiple non-identical" solid-state LED devices. The novel LED systems will be developed with not only high energy efficiency, but also lifetime exceeding 10 years and using product materials that are 80% recyclable.

Enhancing HK's role as an international financial centre

PolyU economists have been analysing the role of Hong Kong's economic and legal environment in supporting its position as an international financial centre. Based on its findings, the research team will recommend enhancements to the city's role in supporting the continuing development of China relative to global financial stability. The project will research on issues including the development of regulatory systems, improvement in corporate governance, support for the nation's financial liberalization and increasing international use of Renminbi, and lessons learnt from the growth and decline of international financial centres.

推動香港進步

理大的創新科研項目為推動香港進步而作出貢獻。

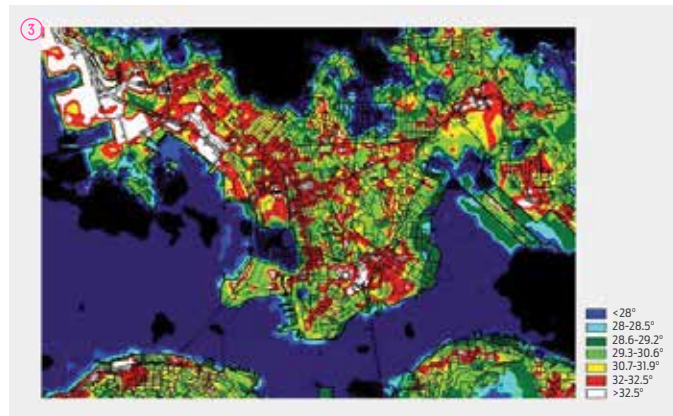
可持續照明技術

這項針對可持續照明技術的研究不僅強調節能，更涵蓋產品壽命及材料的可回收性。研究探討發展一套嶄新的廣義發光二極管系統理論，新系統不但具高能源效益，而且壽命將超過十年，並利用百分之八十可回收的產品材料。

提升香港國際金融中心的地位

理大經濟學家全面分析香港作為國際金融中心所具備的經濟和法律優勢，為提高香港支援中國經濟於環球金融市場穩定的大環境下持續發展中所扮演的角色而提供意見。這項目探討監管系統的發展、改善企業管治、支持國家金融開放、推動人民幣在國際間廣泛使用，以及從國際金融中心的發展和沒落中所獲取的教訓。

③
A thermal satellite image showing surface temperature distribution
熱紅外遙感反演地表溫度分佈



④ ⑦
Bottom trawling vessels
底拖網船

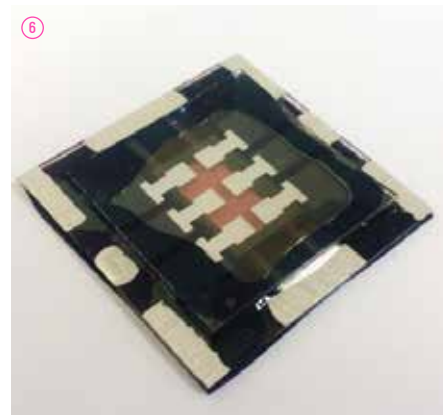


⑤
Sampling of air pollution on board a research aircraft
利用飛機航測進行大氣探測



⑥
An encapsulated sample of solar cells
太陽能電池封裝樣本

⑧
Advanced instruments used to probe the interactions of air pollution and clouds at the summit of a mountain
在高山利用先進儀器探測大氣污染物與雲霧的相互影響



⑥—Organic materials for light emission

PolyU has launched a project on exploring the applications of organic materials in light emitting devices (OLEDs) and photovoltaic cells (OPVs). Since the performance of the device depends critically on the quality of the materials, the team will research how to optimize the deposition process of the materials. It will also investigate novel structure for the development of cost-effective high efficiency OPVs. This project aims to address the global challenge to develop clean and renewable energy.

有機發光材料

理大研究有機材料在太陽能電池和發光二極體領域中的應用。由於材料的品質對器件性能有決定性的影響，因此研究團隊集中探討材料的性能，並優化材料製備工藝，同時也會使用新型的器件結構來提高太陽能電池轉化效率。此項目旨在探討全球清潔再生能源議題所面對的挑戰。

Exploring marine environment following trawl-ban

The research will examine whether the HKSAR Government's trawl-ban results in ecosystem rehabilitation and the recovery of fisheries. Over time researchers will investigate the catch-per-unit-effort of commercially important fish and invertebrate species, the biodiversity of benthic marine animals, and the mean trophic level of consumers in different guilds (i.e., food-web structure). The study will also examine the effects of changing environmental characteristics on benthic biodiversity following the trawl-ban.

Urban ventilation of high-rise cities

With its profusion of tall buildings and complex geographical setting, Hong Kong provides a unique world laboratory for studying city ventilation. Partnering with University of Hong Kong researchers, PolyU researchers have been conducting ventilation research with the objectives to (a) understand city ventilation mechanisms under strong or weak wind and the interaction of wind with buoyancy driven flows; (b) determine the roles of major urban morphological, environmental and meteorological parameters in city ventilation; and (c) compare ventilation conditions in Hong Kong and Shenzhen to provide guidelines for future city design.

FOSTERING NEW PERSPECTIVES IN NICHE AREAS

The University has provided support to the development of several niche areas that can raise its profile regionally and internationally. The following are some examples:

Photochemical ozone, haze and acid rain pollution

This PolyU-led China Basic Research project sought to understand the sources, chemical and physical processes of air pollution in the Pearl River Delta (including Hong Kong), the Yangtze River Delta and the Beijing-Tianjin Cluster using advanced measurement techniques on aircraft at mountain-tops and at ground sites. The findings provided scientific support and contributed to the development of national and regional environmental policies. The research won two second-class awards from China's Ministry of Education and Ministry of Environmental Protection.

Formulating new models for transport service industry

The key players in the transport market are shippers and carriers who move freight. This project investigated shippers' procurement of transport services from carriers. The issues involved, such as value discounts, seasonality, volume commitment, firm expansion and market concentration, were newly identified and formulated in novel optimization and econometric models, with new analytical techniques and solution methods.

禁止拖網捕魚對海洋生態環境的影響④⑦

該項目研究在香港政府漁農自然護理署實施拖網禁令後，能否修復香港海洋底棲生態系統及漁業。研究團隊進行了長時間的驗證，驗證指標包括：具重要商業價值的魚類和無脊椎動物的單位漁獲量、海洋底棲動物的多樣性，以及生物鏈中各消費者的平均營養位階（即食物網結構）。研究亦探討在頒佈禁令後，環境的變動對底棲生物多樣性的影響。

超高密集型城市的通風機制③

香港擁有高層建築和複雜的地理環境，這正為研究城市通風機制提供一個獨特的世界實驗室。因此，理大與香港大學的研究人員共同進行通風機制的研究，旨為（一）了解強或弱風下的城市通風機制和風力與浮力驅動流的相互作用；（二）探討城市形態、環境和氣象參數在通風機制中的角色；以及（三）比較香港和深圳的通風條件，為未來城市設計提供指引。

發展專長領域

理大對一些能夠提升大學在區內及國際上的影響力之「專長領域」提供支援，其中包括：

光化學臭氧、灰霾和酸雨污染⑤⑧

這個由理大領導的研究項目，目的是瞭解珠江三角洲（包括香港）、長江三角洲及京津唐地區大氣污染物的來源、形成、遷移轉化和輸送規律。利用先進的測量技術，包括飛機航測及地面觀測，研究結果為國家和地區制定環境政策提供科學依據。該項研究更獲得國家教育部自然科學二等獎和國家環境保護部科學技術二等獎。

開發嶄新運輸服務業模型

貨運市場的關鍵角色為企業貨主及航運公司。通過深入了解貨主和航運公司運輸服務的營運流程，研究團隊探討了運費折扣、市場季節性變化、貨量承諾、公司擴張和市場集中度等因數。團隊繼而開發創新的優化技術和計量經濟學模型，並進行分析和尋求解決方案。

⑨ Improving concrete structures by high-performance composites

Reinforced concrete structures face two major performance issues – inadequate resistance to earthquakes and long-term deterioration mainly caused by the corrosion of the steel reinforcement. To tackle these problems, PolyU researchers utilized fibre-reinforced polymer composites to enhance the performance of reinforced concrete structures. The research also led to the development of sensors for the long-term monitoring of reinforced concrete structures, particularly their foundations.

Producing upgraded photonic fibres

A multi-disciplinary PolyU team produced glass and polymeric photonic crystal fibres (PCF) and fibre sensors with properties equal to or better than state-of-the-art PCF and sensors which have been used in structural health monitoring of railways for high-speed trains and biomedical applications. The six focus areas of the project are photonic crystal fibre technology, fibre sensors, optical signal processing and communications, theory and modelling, semiconductor optoelectronic devices and materials research.

高性能復合材料改善混凝土結構

鋼筋混凝土結構的兩個主要問題是不足以抵抗地震，以及主要由鋼筋銹蝕引起的性能劣化。為了解決這些問題，理大研究人員採用高性能纖維增強復合材料提升鋼筋混凝土的結構。此外，團隊也開發了一系列傳感器，可用於長期監測結構（尤其是結構基礎）的性能。

經改良的光子光纖

一個理大跨學科團隊製造高性能玻璃和塑料光子晶體光纖和光纖傳感器，達到甚至超過世界水平，可應用於高鐵結構安全檢控和生物醫藥範疇。項目涵蓋六個重點領域，包括光子晶體光纖技術、光纖傳感器、光信號處理和通訊技術、理論分析和建模、半導體光電子器件，以及材料研究。

⑨

Double-skin tubular components of hybrid concrete steel
高性能混凝土的鋼雙壁空心構件

⑩

Olfaction Analysis System
人體呼氣採集與分析系統

⑪

Automated Tongue Image Analysis System
電腦舌像採集與分析系統



Evaluating 'signals' from humans

Researchers at PolyU's Biometric Research Centre proposed the new idea of "Medical Biometrics" to collect "signals" from human beings. Through feature extraction, classification and pattern recognition, these "signals" derived from tongue, odor and pulse diagnosis can be applied in medical analysis. The Centre has become a world leading centre in biometrics research. Hundreds of top journal papers and tens of patents have been published and granted relating to this project.

RESEARCH EFFORTS OF THE INDUSTRIAL CENTRE

Boosting aviation industry growth

With the support of local partners, PolyU and The Boeing Company have established an advanced Aviation Services Research Centre which will help train personnel, implement new procedures and develop innovative technologies to improve the safety, efficiency and capacity of the MRO (maintenance, repair and overhaul) industry. PolyU's Industrial Centre has played an important role in the establishment of the Centre.

World's first Brain Training Device for stroke patients

In collaboration with the Industrial Centre, PolyU's Interdisciplinary Division of Biomedical Engineering has developed the novel Brain Training Device. The device can guide stroke patients to relearn the reconnection between their brains and the paralyzed limbs. It can detect brainwave, thereby control the movement of limbs, and even control a robotic hand.

Developing new control consoles for airport

Appointed by the Civil Aviation Department of HKSAR Government, the Industrial Centre developed new control consoles for the Air Traffic Control Centre and Control Tower of the Hong Kong International Airport. The scope of work included configuration design, layout design, appearance design and lighting design.

Applying 3D printing in biomedical models and tools

The Industrial Centre has established close partnership with the University of Hong Kong, the Chinese University of Hong Kong and Hospital Authority on the design and development of biomedical models and tools by 3D printing and other rapid prototyping technologies. The collaborative projects included the patient specific surgical cutting/drilling guide for bone tumour surgery for the Chinese University of Hong Kong in Prince of Wales Hospital.

人體生物特徵分析

理大生物特徵識別中心的研究人員提出「醫學生物特徵」這一概念，並採用圖像處理及模式識別方法，從人體獲取舌頭、氣味及脈象等信號，經分析後可應用於疾病的診斷。該中心發表了上百篇論文和擁有數十項專利，在全球生物特徵識別領域處於領導地位。

工業中心 致力科研發展

促進航空服務業發展

理大和波音公司獲本地夥伴支持，設立一所先進的航空服務研究中心，致力培訓專才、實施嶄新工序，以及開發創新技術，以提高飛機維修工程業界的安全性、效率和生產力。理大工業中心的參與對設立航空服務研究中心至關重要。

全球首部「中風腦功能訓練儀」

理大跨領域學部與工業中心研究團隊研發出「中風腦功能訓練儀」，幫助中風病人重新連繫大腦及癱瘓了的肢體。它能探測腦電波，協助病人控制癱瘓肢體的移動，甚至可用於控制機械手。

全新航空交通管制台

香港特別行政區政府民航處委托工業中心為香港國際機場的航空交通管制中心和指揮塔進行了多項裝備設計工作，包括控制台的終端設備配置設計、佈局設計、外觀設計及照明設計等。

三維打印技術用於製造醫學模型及工具

工業中心與香港大學、香港中文大學及醫院管理局一直合作把三維打印技術用於醫學模型及工具的設計和製造。合作項目包括為香港中文大學威爾斯親王醫院骨腫瘤手術病人特製手術切割／鑽孔參照模具。

MAJOR AWARDS FOR RESEARCH AND DEVELOPMENT PROJECTS

獲獎科研項目



41ST INTERNATIONAL EXHIBITION OF INVENTIONS (GENEVA, SWITZERLAND, 10-14 APRIL 2013) 第四十一屆國際發明展(瑞士日內瓦,二零一三年四月十至十四日)

AWARD 獎項	PROJECT 項目	PRINCIPAL INVESTIGATOR / FACULTY / DEPARTMENT 首席研究員/學院/學系
Grand Prize of L'AGEPI – Special Prize of State Agency for Intellectual Property, Republic of Moldova 摩爾多瓦知識產權局特別大獎 Gold Medal 金獎 ⑬	Intelligent Ship-Bridge Anti-collision Surveillance System 橋樑防船撞智能監控系統	Prof. Ni Yiqing, Department of Civil and Environmental Engineering 土木及環境工程學系倪一清教授
Gold Medal with Jury's Commendation 評判特別嘉許金獎 ⑭	Fabric Touch Tester 織物觸感儀	Prof. Li Yi, Institute of Textiles and Clothing 紡織及製衣學系李翼教授
Special Award from the Romanian Delegation 羅馬尼亞代表團特別獎 Gold Medal 金獎 ⑮	Novel Flavonoid Dimers for reversing cancer drug resistance 一種新型的腫瘤多藥耐藥逆轉劑 — 黃酮類二聚物	Dr Larry M.C. Chow and Prof. Chan Tak-hang, Department of Applied Biology and Chemical Technology 應用生物及化學科技學系周銘祥博士及陳德恒教授
Special Award from the Romanian Delegation 羅馬尼亞代表團特別獎 Gold Medal 金獎 ⑯	Online Monitoring System for High Speed Laser Spot Welding 高速鐳射點焊監測系統	Prof. H.C. Man, Faculty of Engineering 工程學院文効忠教授
Gold Medal 金獎 ⑰	An Energy-Saving, Wide-Colour Gamut LED Display System 一種兼備節能和高顯色功能的LED戶外顯示屏系統	Dr K.H. Loo, Dr Y.M. Lai and Prof. Michael C.K. Tse, Department of Electronic and Information Engineering 電子及資訊工程學系盧家航博士、黎沃銘博士及謝智剛教授
Gold Medal 金獎 ⑱	Imaging Colour Measurement System based on Multispectral Imaging Technology 基於多光譜成像技術的顏色測量系統	Prof. John Xin, Institute of Textiles and Clothing 紡織及製衣學系忻浩忠教授
Bronze Medal 銅獎 ⑲	Smart Garment with Traditional Chinese Herbal Medicine Microcapsules for Treating Atopic Dermatitis 治療過敏性皮炎的中草藥微膠囊智能服裝	Dr Patrick C.K. Hui and Dr Frencky Ng, Institute of Textiles and Clothing 紡織及製衣學系許賜亮博士及吳秀芬博士

ASIA PACIFIC ICT (INTERACTIVE COMPUTER TECHNOLOGY) AWARDS 2012 二零一二年亞太資訊及通訊科技大獎

Top prize in the "e-Health" category 「電子健康組別」冠軍 ⑳	KineLabs – computer body motion games for the rehabilitation treatment of stroke patients 為中風病者康復治療而設計的電腦體感遊戲	Prof. Raymond Tong Kai-yu, Dr Fong Ching-hang, Mr Lawrence Chong Kwok-wai and Mr Nathan Lam Kim-fung, Interdisciplinary Division of Biomedical Engineering 生物醫學工程跨領域學部湯啟宇教授、方靖行博士、莊國偉先生及林劍峰先生
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DESIGN-RELATED AWARDS 設計相關的獎項

2012 Successful Design Awards – China – Diamond Award 二零一二年最成功設計鑽石獎(中國)	BrailleWise – an aircraft lavatory system for the visually impaired 為視障人士而設計的飛機衛生間點字系統	Prof. Michael Siu, School of Design 設計學院邵健偉教授
2012 Crystal Cabin Awards (Industrial Design and Technical Concepts category) – Runner-up Award 二零一二年水晶機艙獎(工業設計及技術概念類別)亞軍		
Perspective Awards 2012 (International Interior Design category) – Certificate of Excellence 二零一二年透視設計大賞(國際室內設計組別)優異獎		
Good Design 2012 二零一二年優秀設計獎 ㉑		