理PolyU 程Milestones

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

Innovation Tower fosters creative use of design for social good

創新樓．善用創意設計　推動社會進步

June 2014
2014年6月

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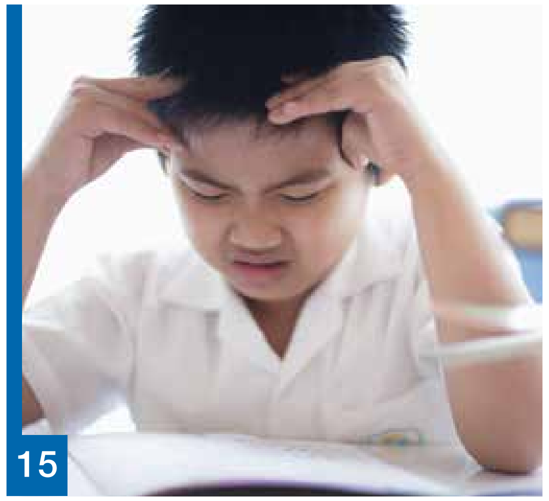
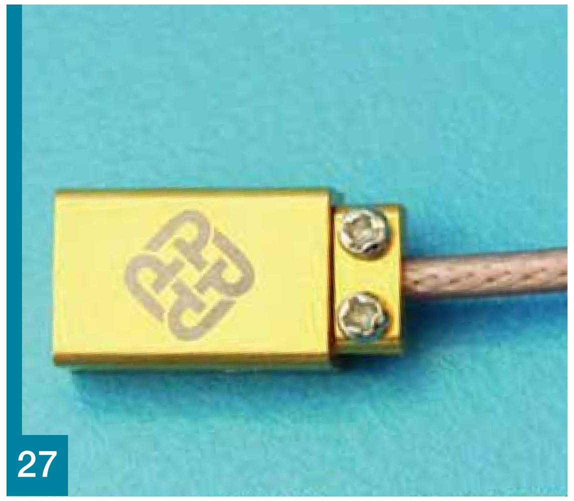
Contents 目錄





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Innovation Tower fosters creative use of design for social good

創新樓．善用創意設計　推動社會進步

Official opening of the Jockey Club Innovation Tower marks PolyU's commitment to design innovation for the betterment of society.

賽馬會創新樓正式開幕，
標誌著理大承諾運用設計創意改善社會。

Rising fluidly from the northeastern tip of PolyU's Hung Hom campus, the Jockey Club Innovation Tower is a landmark design in its own right. Yet it also marks a continuing heritage of creative design used to bolster the social good and an aspiration of helping Hong Kong towards a more diversified economy. Housing PolyU's world-renowned School of Design, now in its 50th year, and the newly inaugurated Jockey Club Design Institute for Social Innovation (JCDISI), the Tower is quickly becoming a focal point in the development of Hong Kong as a design hub in Asia.

賽馬會創新樓座落於理大紅磡校園東北端，以不規則流線型態聳立，成為別樹一格的設計地標。它秉承一貫的創意設計，以鞏固社會持續創新，並推動香港經濟多元發展。作為成立了五十周年、享負盛名的理大設計學院，以及新建的賽馬會社會創新設計院之總部，此大樓旋即在香港發展亞洲設計樞紐的進程中成為焦點。

The official opening ceremony on 18 March attracted both local and international guests, including government officials and professionals from such diverse fields as architecture, design, arts and culture, education, engineering and business, to name just a few.

Officiating at the plaque unveiling ceremony were Ms Marjorie Yang Mun-tak, PolyU Council Chairman; Mr T. Brian Stevenson, Chairman of The Hong Kong Jockey Club; and Prof. Timothy W. Tong, PolyU President. Other officiating guests included the Tower's architect, Dame Zaha Hadid, founder of Zaha Hadid Architects; the Hon. Eddie Ng Hak-kim, HKSAR Secretary for Education; Prof. Roy Chung Chi-ping, PolyU Court Chairman; Dr Victor Lo Chung-wing, Immediate Past Chairman of the PolyU Council; Ms Eva Yam, Deputy Secretary-General of University Grants Committee; Prof. Cees de Bont, Dean and Chair Professor of the School of Design; Mr Patrik Schumacher, Zaha Hadid Architects; and Mr Lai Wai-kin, President of the PolyU Students' Union.

Ms Marjorie Yang thanked the government and the University Grants Committee for their support, and paid special tribute to her predecessor as PolyU Council Chairman, Dr Victor Lo, noting that the University needed such a visionary leader to kick start the unconventional mega-scale project. Her thanks also went to The Hong Kong Jockey Club Charities Trust, which contributed HK$249 million to the construction and fit-out of the Tower, along with the first three years of operating costs for JCDISI. Mr T. Brian Stevenson, Chairman of The Hong Kong Jockey Club, suggested, "the Tower would help PolyU cement its role as the design hub for Asia and extend its international reputation for creative design and innovation, thereby contributing more to Hong Kong's creative industries".

Prof. Timothy W. Tong later summarized the input of all parties concerned, including the entire University community, explaining that "this iconic and symbolic building is the fruit of collective efforts". The Tower's architect, Zaha Hadid, expanded on the concept of collectivity at the opening ceremony, commenting that the Tower would provide a "creative and multidisciplinary environment" where a variety of design programmes are delivered by diverse professions and expertise at PolyU; nurturing talents in a collective research culture where many contributions and innovations can influence each other.

大樓的開幕慶典於三月十八舉行，雲集來自世界各地的嘉賓，包括政府官員及不同界別，如建築、設計、文化藝術、教育、工程、商界等的專業人士。

大樓牌匾揭幕儀式由理大校董會主席楊敏德女士、香港賽馬會主席施文信先生及理大校長唐偉章教授主持。其他主禮嘉賓包括：大樓的建築師扎哈・哈迪德建築師事務所創辦人扎哈・哈迪德女爵士、教育局吳克儉局長、理大大學顧問委員會主席鍾志平教授、理大校董會前任主席羅仲榮博士、大學教育資助委員會副秘書長任雅玲女士、理大設計學院院長兼講座教授方啟思教授、扎哈・哈迪德建築師事務所Patrik Schumacher先生，以及理大學生會會長賴偉健先生。

楊敏德女士感謝政府及大學教育資助委員會的支持外，更特別向校董會前任主席羅仲榮博士致敬，因為大學就是需要像羅博士般目光遠大的領導者，方能造就一項突破傳統且規模這麼龐大的計劃。此外，她還由衷的感謝香港賽馬會捐助二億四千九百萬港元興建大樓，以及成立和支持社會創新設計院首三年的運作經費。香港賽馬會主席施文信先生表示：「大樓將有助鞏固理大在亞洲設計界的地位，並提升其在創新設計上的聲譽，從而促進本港創意產業的發展」。

唐偉章教授總結各界有關人士，包括整個大學社群在這項目中的貢獻，他說：「這座風格獨特又極具象徵意義的大樓是多方努力及鼎力支持的碩果。」建築師扎哈・哈迪德於開幕致辭時引述其集體創新的概念，她表示大樓營造『創意和跨領域的環境』，發揮理大跨專業團隊的合作，開辦各式各樣的設計課程；並在創作和創新相互沖擊下的研究文化中培育出色的設計人才。

(Photo on left page) (from left) Prof. Cees de Bont, Prof. Roy Chung Chi-ping, Ms Eva Yam, the Hon. Eddie Ng Hak-kim, Prof. Timothy W. Tong, Mr T. Brian Stevenson, Ms Marjorie Yang Mun-tak, Dame Zaha Hadid, Mr Patrik Schumacher, Dr Victor Lo Chung-wing and Mr Lai Wai-kin

(左頁圖片)(左起) 方啟思教授、鍾志平教授、任雅玲女士、吳克儉局長、唐偉章教授、施文信先生、楊敏德女士、扎哈・哈迪德女爵士、Patrik Schumacher先生、羅仲榮博士，以及賴偉健先生

A fluid and inclusive space

Dame Hadid is no stranger to drawing together elements to intensify existing urban landscapes, ensuring that her designs, no matter how unconventional, fit their intended users' purposes. Speaking before the Tower's opening, the world-renowned architect, recipient of more than 100 awards and first woman to receive the Pritzker Architecture prize, mentioned that "we like to work with fluidity because we believe it visually simplifies everything, and you can then cope with more complexity in a building without crowding or cluttering the visual scene". "Life", she said, "is not made to a grid", likening her architecture to irregular and uneven natural landscapes that nevertheless make people relax.

The Tower's fluidity, achieved through the careful blending of its landscape, floor plates and louvres, allows it to seamlessly merge with its podium. Voids draw in natural daylight and fresh air, and heighten the sense of external continuity. Internally, the long escalator leading up from the foyer acts as a route to the teaching spaces above. The intention is to promote opportunities for interaction and allow the different activities happening in the Tower to create coordinated repertoires in a nurturing space.

That very human element of the Jockey Club Innovation Tower's design, with its expectation of connections and the capacity for creativity, will provide an ideal setting as the School of Design expands in a broader range of design disciplines, including product design, communication design, advertising design, digital and interactive media, and environment and interior design, among others. The Tower's 15,000 square metres of net floor area can accommodate more than 1,800 students and staff members, offering them state-of-the-art facilities for multidisciplinary design education and innovation, including exhibition areas, multifunctional classrooms and lecture theatres, design studios, workshops and a communal lounge.

As PolyU Council Chairman Ms Yang put it in her speech at the opening ceremony, the Tower's tranquillity as well as the energy and excitement generated within it combine in a perfect statement of the work-life balance that the University seeks to encourage.

> "The Tower's tranquillity as well as the energy and excitement generated within it combine in a perfect statement of the work-life balance that the University seeks to encourage.
>
> 大樓營造出既安寧且充滿能量和動力的氛圍，
> 跟大學提倡工作與生活平衡的精神同出一轍。"
>
> *PolyU Council Chairman Ms Marjorie Yang*
> *理大校董會主席楊敏德女士*

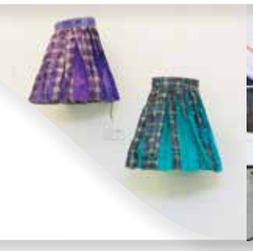
創造流線型共融空間

哈迪德女爵士以巧妙融合元素，優化城市景觀而見稱。她擅長配合用家的需要，營造獨特的設計風格。蜚聲國際的扎哈・哈迪德是首位榮獲普利茲克建築獎的女建築師，其設計獲逾百項殊榮，她於典禮上表示：「我們對流線型設計情有獨鍾，因它在視覺上簡化事物，能締造舒適的視覺效果，縱使大樓內設計更複雜，亦不會顯得擠迫或雜亂。」她認為人生本來就不是活在一個框架內，就如其順天然地勢的不規則、不對稱的設計一樣，予人身心舒泰的感覺。

大樓設計細緻地融合天然地貌與地板及窗頁建材，盡顯流線動態，更巧妙地與其平台渾成一體。中空位置引入天然光線和新鮮空氣，予人延續感。大樓內的長直扶梯由平台往上伸展，充當通往上層教室的路徑。這意念旨為促進互動契機，協調在大樓內進行的各種活動，共同營造學術氛圍。

賽馬會創新樓強調連貫聯繫，鼓勵創意。這些人性化元素為設計學院提供了一個理想環境，以發展更廣闊的設計範疇，包括：產品設計、傳意設計、廣告設計、數碼及互動媒體、環境及室內設計等。大樓實用面積一萬五千平方米，可容納超過一千八百名師生，配備最先進設施，供跨領域設計教育及創新發明之用，其中包括展覽廊、多用途課室與演講廳、設計工作室與工場，以及共用空間等。

正如理大校董會主席楊女士在開幕典禮上致辭時說，大樓營造出既安寧且充滿能量和動力的氛圍，跟大學提倡工作與生活平衡的精神同出一轍。



Innovation for social good

Seen from a broader perspective, the design work done in the Jockey Club Innovation Tower has a simple goal – to improve lives. As Chairman Yang commented, "innovation is about making creative use of knowledge for the betterment of society". With JCDISI settled in the Tower, its capacity to draw a range of disciplines together to work for the good of society is greatly enhanced. Indeed, developing future leaders who are aware of their social responsibilities is one of PolyU's core missions.

As Prof. Tong observed, the community – broadly defined – has high expectations of the University in general, and of the Tower in particular. He mentioned that the "Tower is not only for our School of Design, it is for all our Faculties and Schools to work on their multi-disciplinary initiatives; it is not only for PolyU, it is for our whole community – the government, business and industry, NGOs, academia – for bringing our minds together, engaging in dialogues, jamming ideas and thus, innovating."

The objective of setting up JCDISI is to formalize links between academia and various sectors of society in developing multidisciplinary design innovations with positive social impacts. Yet the School of Design, under which JCDISI operates, has a 50-year heritage of contributing in broader ways to society through design.

Since its establishment as a department of the then Hong Kong Technical College in the 1960s, the School has grown from offering only part-time general certificate courses to being the sole provider offering a full spectrum of design programmes at undergraduate, master's and doctoral levels in Hong Kong. At the international level, PolyU design research won fitting recognition at the 2009 BusinessWeek/Industrial Designers Society of America IDEA Awards, taking out the Best of Show Award and Gold Award. In 2012, the School took a further step into the international spotlight, being recognized by *Business Insider* as the only one in Asia among the top 25 design schools in the world.

Looking back and striding forward

Concurrent with the Tower's opening, the School of Design held a series of events to celebrate its 50 years of success, reflecting on achievements with the specific aim of plotting new courses into the future. A major exhibition held from 19 March to 30 April entitled "The Next 50: Layers of Design Creativity from Hong Kong" was a collaborative effort of seasoned creators and cross-disciplinary inventors staged in the Jockey Club Innovation Tower. The event showcased the School's heritage, how graduates have developed a culture of entrepreneurship in Hong Kong and how design can lead innovation in society as we head into the future.

Also featuring as part of the celebrations was a Master Lecture Series led off on 19 March by Mr Patrik Schumacher of Zaha Hadid Architects, who discussed "Design across scales and continents". Prof. Richard Goossens from Delft University of Technology in the Netherlands spoke on "Design-driven innovation in healthcare". The series was rounded out on 28 April by the "Dialogue with Thomas Heatherwick", the founder and principal of Heatherwick Studio who designed the award-winning UK Pavilion for the Shanghai World Expo 2010.

On 20 March, the G/Local International Symposium for Social Innovation brought together leading design thinkers to discuss the significance, successes and limitations of design for social good. Ms Kigge Hvid, CEO of INDEX: Design to Improve Life in Denmark, delivered a public lecture on "Award winning works of social innovation". A panel discussion on the "Global Challenges and Trends of Social Innovation" then rounded out the stimulating exchange of ideas for the day.

As Prof. Tong said at the Tower's opening ceremony, PolyU is "in a unique position to support the local, and indeed the regional, design industries". Following the opening of the Jockey Club Innovation Tower, the design teaching, research and other related activities taking place in it will certainly be helping to shape social futures in Hong Kong and well beyond for a better world.

創意帶動社會進步

從宏觀角度來看，賽馬會創新樓的設計工作朝著一個簡單的目標，就是改善生活。如楊主席所言「創新是有創意地運用知識去改善社會」。大樓容納了賽馬會社會創新設計院，大大提升不同界別為社會進步而匯聚協作的能力。培育未來領袖的社會責任感，固然是理大核心使命之一。

唐教授認為，社區普遍對理大、特別是對這大樓寄予厚望。他表示「大樓不僅是為了我們的設計學院，更是為實現所有學院的跨領域合作而蓋建；興建這大樓不僅是為了理大，更是為了整個社區—政府、工商界、非政府組織、學術界共同匯聚智慧、互動交流、激發創意，從而推動創新。」

賽馬會社會創新設計院的成立，是要把學術界與社會不同界別聯繫，讓跨領域創新設計得以發展，為社會帶來正面的影響。而其隸屬的設計學院，早在五十年前開始，一直致力藉著設計，從多方面回饋社會。

一九六零年代，設計學院於理大前身香港工業專門學院成立，由最初只開辦證書課程，發展至現時為本港唯一提供全面設計教育的學院，涵蓋本科、碩士及博士程度的課程。理大的設計研究在國際間備受肯定，於二零零九年在美國設計師學會舉辦的《商業週刊》國際傑出設計大賽中奪得最佳表現獎及金獎。二零一二年學院更進一步，成為亞洲唯一獲《商業內幕》雜誌選為全球最優秀二十五所設計學府之一。

回首五十・邁向未來

在大樓開幕的同時，設計學院亦舉辦了一系列活動，慶祝五十載的豐碩成果，並展現邁向未來的計劃和進程。其中一個重點展覽於三月十九日至四月三十日在賽馬會創新樓舉行，題為「The Next 50: Layers of Design Creativity from Hong Kong」，呈獻閱歷豐富的創作人和跨界別發明家的協作成果。展覽還呈現了學院的歷史傳統、畢業生如何推動香港的創業文化、以及設計如何帶動社會創新的發展。

另一重點活動是大師講座系列，首個講座於三月十九日舉行，由扎哈・哈迪德建築師事務所Patrik Schumacher先生主講，題為「Design across scales and continents」。另來自荷蘭代爾夫特理工大學的Richard Goossens教授主持題為「醫護界的創新設計」的講座。而閉幕講座「與Thomas Heatherwick對話」於四月二十八日舉行，由Heatherwick Studio創辦人兼首席設計師Thomas Heatherwick主講，他亦是二零一零年上海世博會英國館的得獎設計師。

三月二十日舉行的社會創新國際研討會雲集全球設計界權威，討論設計改善社會的意義、成效及限制。來自丹麥的INDEX: Design to Improve Life行政總裁Kigge Hvid女士發表了題為「獲獎社會創新項目」的演說。另大會舉辦了題為「全球社會創新的挑戰與趨勢」的論壇，促進與會者相互交流。

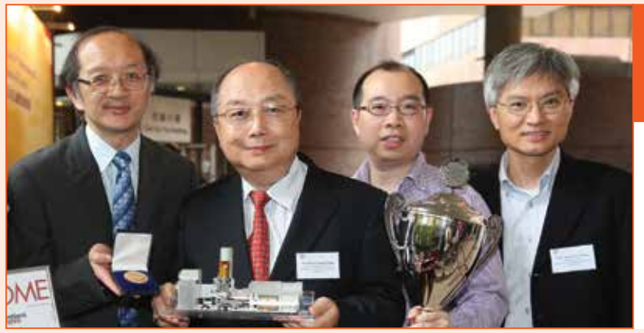
唐教授於大樓的開幕典禮上表示，理大在支持本地以至區內的設計產業方面擔當獨特的角色。隨著賽馬會創新樓的啟用，大樓內進行的設計教學、研究及其他相關活動必定有助推動香港及其他地區的社會發展，塑造更美好的世界。

Harvest of innovations at Geneva's Invention Expo

創新碩果揚威國際發明展

At the 42nd International Exhibition of Inventions of Geneva, PolyU researchers scooped 11 awards, including one Grand Prize, one Special Gold Medal, three Special Awards, four Gold Medals and two Silver Medals.

理大科研人員在日內瓦舉行的第四十二屆國際發明展上囊括十一個獎項，包括一項特別大獎、一項特別金獎、三項特別獎、四項金獎及兩項銀獎。



Grand Prize and Gold Medal with Jury's Commendation
特別大獎及評判特別嘉許金獎

Soil preparation system
行星表土準備系統

Principal Investigator: Prof. Yung Kai-leung, Department of Industrial and Systems Engineering
發明者：工業及系統工程學系容啟亮教授

Prof. Yung Kai-leung (second from left) and his research team
容啟亮教授（左二）及其研究團隊

The soil preparation system for grinding and sifting Phobos rocks
用作土壤磨碎及篩選的行星表土準備系統

Developed for taking soil samples during the aborted "Phobos-Grunt mission to the Martian moon Phobos", the PolyU designed and built "Soil Preparation System" (SOPSYS) will be redeployed in upcoming Sino-Russian missions to explore "Phobos".

"SOPSYS", compact and lightweight at under 400 grams, has enormous potential for applications in a range of environments. It grinds and sifts rocks to sub-millimetre size and can function in extreme or adverse conditions including those with large daily temperature differences, low gravity, and vacuums, and with high levels of dust and cosmic radiation. It can also cope with various unforeseen hazards such as jamming due to excessively hard rock fragments.

Supporting in-situ analysis, the system promises to be part of a crucial step in understanding the evolution of the universe. Some of the technologies developed for "SOPSYS" were applied in the "Camera Pointing System", the pioneering space engineering mechanism developed at PolyU for China's successful Chang'e-3 lunar mission.

理大研發的「行星表土準備系統」曾用於中俄合作的「火衛一・土壤」太空計劃中，並試圖在火星衛星「火衛一」表面著陸，採集土壤本以進行實地分析；這系統將重新應用到未來的「火衛一」探索任務中。

「行星表土準備系統」體積輕巧，僅重四百克，技術轉移潛力高，可作多方面應用。這系統能磨碎土壤，並篩選出直徑少於一毫米的樣本進行實地分析；並能在極端溫差、無重狀態、真空、多塵及充滿宇宙射線的惡劣環境下運作。它亦有能力應付環境中未可預計的難題，如太多堅硬石塊碎片引致的淤塞。

這系統所作出的實地分析結果，對於宇宙演化的研究至為重要。系統中的技術更被應用到理大另一重大航天工程發明—「相機指向機構系統」，並已成功隨嫦娥三號登陸月球。

Special Award and Gold Medal
特別獎及金獎

Preparation of food grade capsules for targeted drug delivery
可定向輸送藥物的食品膠囊製備方法

Principal Investigators: Dr Wang Yi and Dr Wong Ka-hing, Department of Applied Biology and Chemical Technology
發明者：應用生物及化學科技學系王奕博士及黃家興博士

(Top) Dr Wang Yi (first from left) and Dr Wong Ka-hing (second from left) and their research team member
(上圖) 王奕博士 (左一)、黃家興博士 (左二) 與其研究團隊成員

(Bottom) Food grade capsules
(下圖) 食品級膠囊

Capsules are commonly made of synthetic polymers or animal derived gelatin, which are of great safety and health concern. PolyU researchers have thus developed a novel food-grade capsule that ensures drug safety for human health.

This capsule is prepared using zein – a major corn protein, and pectin – a gel-forming polysaccharide obtained from most citrus fruits. The researchers took advantage of the unique physicochemical properties of the two materials to specially design the capsule, in which the zein acts as a water barrier to protect the pectin from swelling, while the pectin protects the zein from intestinal digestion. By varying the ratio of these two materials and modifying the capsule design, targeted drug delivery to the stomach, small intestine or colon can be achieved.

As the capsule materials are food-grade, plant-based and under-utilized by-products, they are safe, fit for vegetarians and inexpensive. This method of capsule preparation can be broadly applied in both the drug and health food industries.

藥物膠囊一般由合成聚合物或動物性明膠製成，這些材料的安全性和對人類健康的影響受到極大的關注。有見及此，理大應用生物及化學科技學系開發一種新型食品級膠囊，確保藥物安全，不會影響人類健康。

這膠囊採用了玉米醇溶蛋白及從柑橘水果中提取的可形成凝膠多糖果膠而製成。科研人員根據物質中的獨特物理化學特質而設計，當中的玉米醇溶蛋白充作隔水層功能，避免果膠吸水膨脹；而果膠則避免玉米醇溶蛋白在小腸中被消化掉，發揮相輔相成之效。通過調整兩種材料的比例和膠囊的設計，更可以實現定向藥物輸送，把藥物傳送到一個選定的部位，包括胃、小腸或結腸。

由於膠囊材料是從植物提取，但未被充分利用的食品級副產物，因而具有價廉、安全及可供素食者使用的優點。此製備方法可被廣泛應用於藥物及健康食品工業。

Special Award and Gold Medal
特別獎及金獎

Multilayer nanofibre filter-nanoaerosols capture and added functions
可吸附納米氣溶膠並具備其他附加功能的多層納米纖維過濾器

Principal Investigator: Prof. Wallace Leung, Department of Mechanical Engineering
發明者：機械工程學系梁煥方教授

Prof. Wallace Leung (second from right) and his research team
梁煥方教授（右二）與其研究團隊

PolyU has developed a multilayer nanofibre filter made of a light and breathable material that can effectively capture harmful air pollutants and kill bacteria. Conventional microfibre masks, even those intended for surgical use, can only effectively filter particulate matter such as PM2.5, commonly known air pollutants and only 30% of nanoaerosols that lead to even greater health threats. Composed of multiple thin nanofibre layers, this multilayer nanofibre filter performs much better by capturing 80% of aerosols with tiny particle sizes of less than 300 nanometres. Such air pollutants include diesel particulates, laser-printer particles, viruses and small bacteria that easily and invisibly enter our respiratory, vascular, lymphatic and nervous systems, leading to various chronic diseases.

With a lower pressure drop than filters packed in a single layer, this filter's multiple nanofibre layers are each supported by permeable scrim materials that greatly improve breathability. Passing through the functioning nanofibre layers, gaseous pollutants can be converted to harmless substances with light exposure and bacteria can be killed through exposure to water vapour, including sweat. These air-regeneration and multiple-use functions cannot be achieved with conventional coarse microfibre filters.

This high-performing multilayer nanofibre filter can also be applied broadly in filters installed in public transportation and air ventilation systems in indoor areas.

Multilayer nanofibre filters can be used as masks and filtering systems
多層納米纖維過濾器可用作口罩及通風系統過濾層

理大成功以輕巧透氣物料研製成「多層納米纖維過濾器」的口罩，能有效阻隔有害的空氣污染物及殺滅細菌。一般傳統微米級甚至手術用的口罩，只能有效過濾微細粒子如較為人熟悉的懸浮粒子PM2.5，在過濾會危害健康的納米級懸浮粒子方面，成效只有約30%。而這種由多個納米纖維薄層構成的「多層納米纖維過濾器」則能有效阻隔80%的納米氣溶膠級（粒子小於300納米）。這些空氣污染物包括柴油微粒、雷射打印機粒子、病毒和細菌，它們不知不覺中輕易進入人體的呼吸系統、血液循環系統、淋巴系統及神經系統，導致各種慢性疾病。

「多層納米纖維過濾器」中的每個纖維層均內置滲透性無紡布，與把所有納米纖維置於單一纖維層相比，其降壓相對較低，製成的口罩透氣度因而大大提高。在可見光的照射下，氣態污染物經過納米纖維層後可轉化為無害物質；在沾濕後（如遇到汗水），它則能殺滅細菌。這些功能是傳統粗微纖維過濾器無法實現的。

這高效能「多層納米纖維過濾器」更可廣泛應用於公共交通工具的過濾系統，以及室內環境的通風系統中。

Dr Guo Xia
郭霞博士

Adhesive tape helps fix subfluxed joints or correct extreme body deformities
彈性膠帶可用於固定脫臼部位及矯正肢體的畸形情況

Gold Medal
金獎

Rehabilitation adhesive tape inspired by octopus suckers
微吸盤彈性黏貼織物

Principal Investigator: Dr Guo Xia,
Department of Rehabilitation Sciences
發明者 : 康復治療科學系郭霞博士

Most medical adhesive sheets are designed to provide very light and thin films to cover wounds. Yet the adhesive strength of these sheets may not be sufficient to form a solid interface between the tape and the skin. However, medical adhesives with high tackiness are difficult to remove and may result in pain and damage to the skin. To balance adhesiveness and comfort, PolyU's Department of Rehabilitation Sciences and Hong Kong Research Institute of Textiles and Apparel have jointly developed a rehabilitation adhesive tape.

Containing elastic polymer with a biomimetic micro-pattern inspired by octopus suckers, the tape achieves good adhesion to the substrate by Van der Waal's force, a weak yet highly cumulative attraction between molecules. With its elastic advantage, it is easy to remove, re-peelable and reusable for several months. It is also suitable for daily cleaning with water, making it environmental friendly. The tape can help fix subluxed joints and correct extreme body deformities by reducing the motion of injured joints.

市面上的醫用黏貼接布大多以輕巧的薄膜覆蓋傷口，一般難以在皮膚和膠帶間提供足夠的黏附力。而黏性較強的醫用膠帶則難以剝除，甚至會引致疼痛及皮膚損傷。為求在黏附性和舒適度中取得平衡，康復治療科學系遂與香港紡織及成衣研發中心合作開發「微吸盤彈性黏貼織物」。

這創新彈性膠帶構思自八爪魚吸盤，具備微納圖案表面結構，繁密微吸盤的范德華力總和令彈性膠帶牢固地黏貼在表膚上。彈性膠帶易於剝除，亦可重複黏貼及重用多次，使用期長達數月，並可每天用水清洗，非常環保。這膠帶亦可用以減少受傷關節的移動幅度，有助固定脫臼部位及矯正肢體的畸形情況。

Dr Hu Hong
胡紅博士

Elbow protector made of smart impact protective fabric
用智能防衝材料製成的護肘

Gold Medal
金獎

Smart impact protective 3D-spacer fabrics of adaptive stiffness
由三維間隔織物製成的智能防衝材料

Principal Investigator: Dr Hu Hong,
Institute of Textiles and Clothing
發明者 : 紡織及製衣學系胡紅博士

To dissipate impacts during sports, the Institute of Textiles and Clothing and Hong Kong Research Institute of Textiles and Apparel have co-developed a smart impact protective fabric that can be used for energy absorption and impact spreading.

The smart impact protective material is made of three-dimensional auxetic spacer fabric treated with impact hardening polymer that was specially developed based on smart stress-responsive micro-gels. The treated fabric remains soft in normal use but becomes rigid instantly on impact to maximally absorb and dissipate the impact energy. It turns soft again after impact.

This fabric offers high impact protection and excellent comfort due to high air permeability and flexibility. It is washable, making use and care easy, and it can be tailored to any size and shape. Taken together, these features mean that the fabric is a convenient substitute for the polyurethane foams and rubber that are currently used to produce high-performance protective garments and equipment.

紡織及製衣學系與香港紡織及成衣研發中心合作研發出「智能防衝材料」，用以吸收及分散運動過程中產生的衝擊力 ，以達防衝之效。

「智能防衝材料」由衝擊變硬聚合物處理過的三維負泊松比間隔織維製成；而聚合物則採用具智能應力反應特性的微凝膠研製而成。處理過的織物平時會保持柔軟，但受到衝擊時則會立刻變硬，從而盡量吸收及消散衝擊力；衝擊過後，聚合物即會回復柔軟。

這種智能防衝織物具備高透氣度和柔韌性，其防衝防護性及舒適度表現卓越；並可洗可裁，易於使用和護理。這種嶄新的防衝材料可取代現時以聚氨酯泡沫和橡膠製成的高性能衝擊防護服及裝備。

Conventional self-care training for the disabled that is performed in settings with real objects creates potential problems of safety, efficiency and cost effectiveness. The School of Nursing has thus developed a versatile virtual-reality haptic platform that provides force sensation in self-care training. This not only facilitates hand movement, eye-hand coordination and dexterity training in cyber space for people with hand impairments, but also enhances realism and improves learning performance.

Some activities of daily living such as opening a door with a key, pouring water into a glass and handwriting or drawing have already been implemented on the platform. It can be further extended to other applications such as vocational rehabilitation.

已沿用多年的傳統自理訓練大多採用實物操作，存在安全性、效率和成本效益等方面的潛在問題。有見及此，護理學院利用虛擬實境技術開發了一個多功能觸感仿真平台，讓受訓者在訓練中感受到力覺反饋。這平台不僅讓手部傷殘人士在模擬仿真實境中進行手部活動、手眼協調及靈巧度訓練，更加強訓練的真實感和提高學習效能。

這平台提供了用鎖鑰開門、倒水、寫字或繪圖等日常活動的訓練；應用範疇更可進一步擴展到其他方面，如職業康復訓練等。

Dr Choi Kup-sze (left) and the haptic platform for self-care training (right)
蔡及時博士（左圖）及訓練自理能力的觸感仿真平台（右圖）

Special Award and Silver Medal
特別獎及銀獎

Haptic platform for self-care training in occupational therapy
為職業治療中的自理訓練而開發的觸感仿真平台

Principal Investigator: Dr Choi Kup-sze,
School of Nursing
發明者 : 護理學院蔡及時博士

Dr Li Li
李麗博士

Infra-red images of human subject's back while wearing electric heating knitwear
研究對象穿上電子發熱織物後其背部的紅外線圖像

Silver Medal
銀獎

Novel wearable thermal functional textile with conductive materials
應用導電材料設計新型發熱功能性紡織品

Principal Investigator: Dr Li Li,
Institute of Textiles and Clothing
發明者 : 紡織及製衣學系李麗博士

The electronic wear currently on the market is not user-friendly for two main reasons: it lacks a sense of aesthetics and uses over-sized batteries. The Institute of Textiles and Clothing has thus partnered with the Hong Kong Research Institute of Textiles and Apparel to develop a new wearable electronic technology and thermal fabric.

This novel fabric is light and easily usable. With batteries the size of those used for mobile phones, it can be customized in various patterns, heating positions and temperatures. It can also be incorporated into textiles for outdoor apparel, household heating products and healthcare and medical applications.

The researchers based their work on the resistive network model, studying various fabric structures and densities. Through combining textile-based technologies, they then developed a new form of multi-functional fabric and yarn. The conductive path can be fully stowed inside the fabric to conduct heat wirelessly, and the fabric can be washed after the battery is removed.

市場上的電子服裝不便穿著，原因有二：一是外觀欠缺美感，二是電池體積太大。有見及此，紡織及製衣學系與香港紡織及成衣研發中心合作，研發出嶄新的電子服裝技術及發熱織物。

新研發的織物輕巧易用，僅需配上如手機電池般大小的電池，便可按照設定圖案，在多目標位置供熱，亦可在不同的發熱位置產生不同熱度。此外，它亦可應用到戶外服裝、家居發熱產品及醫療護理等領域。

研究人員根據電阻理論為基礎，研究不同織物的結構和密度。研究人員結合不同的織物技術，研發出具備新功能的發熱纖維和紗線。導電路徑完全藏於衣物內，毋需透過電線發熱。拆下電池後，衣物更可用水清洗。

Life Sciences 生命科學

Addressing concerns about child development

關注兒童發展問題

Parenting is never an easy task, especially when developmental issues arise. At PolyU, academics in various disciplines have been offering expert advice to parents on multiple aspects of child development.

養兒育女從來不是易事，更何況孩子在成長中出現問題。有見及此，理大不同專業的學者就兒童發展的各方面問題，為家長提供專家意見。

Managing the behaviour of ADHD children

專注力失調/過度活躍症兒童的行為管理

A joint study by PolyU's Department of Applied Social Sciences and the Boys' and Girls' Clubs Association of Hong Kong has shown that through appropriate training, parents can help their children with ADHD.

一項由理大應用社會科學系及香港小童群益會合作進行的研究指出，家長透過培訓，可有效幫助患專注力失調/過度活躍症的子女。

Life Sciences 生命科學

People often have negative perceptions about children who squirm, fidget or continually talk, or those who are easily distracted and need re-direction and support to complete tasks. Some may even think that poor parenting skills cause Attention Deficit/Hyperactive Disorder (ADHD) in children. It seems that the public has little knowledge about ADHD, and the same is true for many parents of ADHD children. Such children impose increased care-taking and nurturing demands on their parents, who can benefit from effective behavourial management training that not only empowers them to create positive relationships with their children, but also helps them support their children's development.

人們常會對一些坐立不安、心煩氣躁、喋喋不休、容易分心、需支援才能完成任務的兒童帶有負面的觀感。有些人甚至認為兒童患有這些症狀是家長的錯誤育兒技巧所致。這或許是大眾對專注力失調/過度活躍症認知所限，甚至家長本身亦缺乏這方面的認識。事實上，這些兒童很需要家長的照顧及培育，父母可以參加有效的行為管理訓練，學習與子女建立正面關係，以及怎樣支援子女的發展。

Dr Alma Au (left) performing a cognitive assessment
歐美蘭博士 (左) 正進行認知評估

There is a growing international and local need for parent training to improve behavioural problems in children with ADHD. One of the leading local non-governmental organizations that provide support and services to children with special education needs and their families, the Boys' and Girls' Clubs of Association of Hong Kong (BGCA), has implemented a behavioural training programme for parents of ADHD children in its nine centres since 2009. In 2011, PolyU and BGCA began a jointly conducted three-year study to evaluate the programme's efficacy.

The programme covers behavioural features and difficulties encountered by children with ADHD, the hands-on skills needed to help those children pay attention and how to give instructions for and methods of emotional regulation. Led by Dr Alma Au May-lan, Associate Professor at the Department of Applied Social Sciences, the collaborative study determined the programme's effectiveness using quantitative measures during pre-intervention, post-intervention and at a two-month follow-up session. Qualitative case interviews, children's disruptive behaviour and reported parental stress were also considered. Among 177 participating parents of children with ADHD aged between 5 and 12, 125 were in an intervention group and 52 in a control group in the quantitative study. Seven parents and 5 social workers were interviewed for the qualitative analysis. Of the 135 boys and 42 girls studied, performance in cognitive assessments of visual and auditory attention and non-verbal intelligence were analysed.

Using the Eyberg Child Behaviour Inventory, significant progress was found in reducing disruptive behaviour (such as being easily distracted, low concentration, poor single-task processing, having a temper and disturbing parents' work). Parental stress, as measured in areas such as time consumption and effort put into taking care of a child, worry about not doing enough for the child and lack of leisure time, was relieved.

Dr Au said that "the programme proved to be effective. The parent-child relationship improved intangibly, with more trust resulting from better mutual understanding and acceptance". She went on to comment that the parents "used more positive skills, including less beating and scolding, and more compliments, rewards, effective communication, persistence and patience etc. Encouragingly, parents' perceptions of their children spontaneously became much more positive". Parents in the intervention group showed that after the training they had developed better understandings of ADHD and their children, more acceptance of and tolerance towards them, more reasonable academic expectations, a greater focus on their children's strengths and potential, and were less likely to subjectively compare their children with others.

近年來，本地和海外對幫助家長改善專注力失調/過度活躍症兒童行為的培訓需求與日俱增。自二零零九年起，為有特殊教育需要的兒童及家庭提供服務的本地非政府機構—香港小童群益會在轄下九所中心推出一項行為訓練課程。二零一一年，理大與該會合作展開為期三年的研究，以評估這訓練課程的成效。

有關訓練課程涵蓋專注力失調/過度活躍症兒童的行為特性及所遇困難的介紹、加強兒童專注力及向其發指令的技巧、以及情緒管理的方法。以應用社會科學系副教授歐美蘭博士為首的研究團隊在聯合研究中，利用量化評估，於介入前、介入後及為期兩個月的跟進期中，評鑑課程的成效。此外，他們透過個案面談，進行質化評估，了解兒童破壞行為及家長受壓的情況。研究對象為177名家長，其專注力失調/過度活躍子女年齡為五至十二歲，當中125名為量化評估的實驗組，52名為控制組。另外，七名家長及五名社工則參與質化評估的面談部分。研究亦分析了135名男孩及42名女孩的視聽專注力和非語言能力兩方面的認知評估表現。

根據《艾伯克兒童行為量表》的評估結果顯示，課程在減低兒童破壞性行為，如容易分心、集中力低、單一事務處理能力欠佳、易鬧情緒、打擾家長等方面，有顯著的成效。在減低家長壓力方面，如投放很多照顧子女的時間及精神、擔心為孩子做得不足、缺乏休閒時間等，亦有所改善。

歐博士表示：「這證實了課程是有效的。由於家長與子女之間有更深的了解及包容，因而建立起互信，親子關係亦無形中得到改善。」她續說，家長已懂得多利用正面技巧，包括減少打罵、多讚賞和獎勵、有效溝通、持續堅持和有耐性等。家長對子女的觀感亦隨之而變得更正面。實驗組家長在參與訓練後對子女及專注力失調/過度活躍症有更深的認識，更願意接納和包容、在子女的學業上抱著更合理的期望、更關注子女的優點和潛質，並減少將子女與其他孩子作主觀性的比較。

Life Sciences 生命科學

Retarding childhood myopia progression by orthokeratology

角膜矯形術減緩兒童近視加深

A PolyU study on the efficacy of orthokeratology has confirmed its effectiveness in controlling childhood myopia.

理大一項有關角膜矯形術成效的研究，顯示該治療方法對控制兒童近視產生正面效果。

Does your child complain about problems in seeing the blackboard in class or narrow his/her eyes to see better? Childhood myopia has reached epidemic proportions, especially among Asians, and myopic degrees can increase drastically as they grow up. A non-surgical treatment to correct vision, "Orthokeratology" or simply "Ortho-K" treatment, is considered the eye-dream for worried parents of myopic children.

你的孩子可曾投訴在課室看不清黑板或經常瞇著眼才看得清景物？兒童患有近視的比率持續上升，尤其在亞洲人中，兒童在成長階段出現的近視加深情況非常嚴重。一種改善視力的非手術性治療—「角膜矯形術」或簡稱「OK鏡片」，為擔心兒童近視加深的家長帶來希望。

In Ortho-K treatment, myopic children wear specially designed rigid gas-permeable contact lenses at night. Their vision can be improved in the daytime without the need for spectacles or contact lenses, thus bringing convenience to daily life. However, parental support and monitoring, as well as cooperation with eye-care practitioners are essential to safe Ortho-K lens wear and achieving the best outcome.

接受「角膜矯形術」療程的近視兒童，需於晚間佩戴一副特製高透氧度硬性隱形眼鏡—角膜矯形鏡，日間則不用佩戴眼鏡或隱形眼鏡，亦可有清晰視力，令生活更為方便。然而，為讓兒童正確佩戴及清潔鏡片，家長的協助和指引，以及與眼科視光師配合至為重要，確保安全佩戴，達致最佳效果。

(Top) Prof. Pauline Cho
（上）曹黃惠華教授

(Bottom) A myopic child demonstrates ortho-K lens wear.
（下）近視兒童示範佩戴角膜矯形鏡片。

Led by Prof. Pauline Cho, a research team at the School of Optometry has conducted research studies on the effectiveness of Ortho-K in controlling myopic progression in children. The results of one study of 78 children aged 7 to 10 years old with 0.50D to 4.00D myopia showed that myopic progression of those received Ortho-K were 43% slower, compared to the other group of children wearing spectacles.

A two-year study on children aged 8 to 11 years, with myopia more than 5.00D concluded that those receiving Ortho-K treatment (reduction up to 4.00D) with over-spectacles showed smaller increase in refraction (myopia) compared to those using spectacles (0.13D versus 1.00D respectively). The study showed that the children in the Ortho-K group had slower eyeball elongation (by 63%) compared to those who wear spectacles only, meaning that the Ortho-K treatment can significantly retard myopia progression in children with high myopia.

Another two-year study on 6 to 12 year-old children with myopia and moderate to high astigmatism showed that children in the Ortho-K group had significantly smaller increases in eyeball elongation than those wearing spectacles. The rate of eyeball elongation in these children was about 52% slower compared to children wearing spectacles. The results of these three studies showed that Ortho-K treatment is an effective way of slowing down myopic progression in children.

眼科視光學院的研究團隊在曹黃惠華教授的率領下，進行數項研究，了解角膜矯形術控制兒童近視加深的有效性。其中一項研究的對象是七至十歲，近視50至400度的兒童。研究結果顯示接受角膜矯形術的兒童，比較佩戴近視眼鏡的兒童，度數增長減慢43%。

另一項以逾500度近視的八至十一歲兒童為對象，為期兩年的研究結果發現，接受角膜矯形術（減少近視度數平均達400度）兼佩戴較淺近視度數眼鏡的兒童，相比只佩戴近視鏡之兒童，近視度數增長少了很多(分別增加13度及100度)。研究結果同時顯示，角膜矯形有效減慢眼軸伸長達63%，表示這療程對深近視兒童有顯著舒緩近視加深的作用。

另一針對六至十二歲有近視及中度至高度散光的兒童之研究，顯示接受角膜矯形術的兒童，比較佩戴近視眼鏡的兒童的眼軸平均增長少很多，角膜矯形術可大幅減慢眼軸增長達52%。以上三項研究的結果顯示，角膜矯形術是一種有效減慢兒童近視加深的方法。

Life Sciences 生命科學

A unique cross-disciplinary experiment, “Heaven and People in One, Generation by Generation - an exhibition on Shaanxi culture and design innovation”, was staged in May to explore cultural integration with design education.

五月間，理大舉行了題為《天人合一，代代相傳—陝西文化與設計創新展》的獨特跨領域實驗，藉以探索文化與設計教育的融合。

Researching the intriguing relationship between science and art

研究科學與藝術的奇妙關係

Staged at the Jockey Club Innovation Tower on campus and featuring the creative works of 12 distinguished artists, designers and non-material culture research conservation experts, this exhibition showcased the collaborative efforts between PolyU and Xi’an Jiaotong University with the establishment of the Joint Research Centre on Creative Culture Industries for Western China.

This exhibition also saw the collaborative achievements between PolyU and Le French May. The University’s Faculty of Humanities and School of Design jointly organized an exhibition titled “Chromotopias” and invited a delegation of artists and scientists from Ars Mathematica to present their latest research themed “Materials for Inventions”. Art was explored as a partner in the development of science and technology through digital sculpture and thermochromic pigments. In relation, Prof. Tang Ming-xi at the School of Design conducted a lecture series on Art and Science. The opening of the exhibition was graced by distinguished guests including Dr Isabelle Saves, Attaché (Science and Academic Affairs), Consulate General of France in Hong Kong and Macau.

展覽於校園內的賽馬會創新樓舉行，呈現了陝西省十二位著名藝術家、設計師和非物質文化研究與保護專家的創意作品，亦展示出理大與西安交通大學攜手成立的中國西部文化創意產業研究中心的協作成果。

這次展覽更為理大與法國五月帶來合作機會。理大人文學院及設計學院聯合協辦名為《色彩領地，材料創新》的展覽，並邀請了法國藝術與科學國際學會的藝術家和科學家參展，以《發明創新的材料》為題，展示他們最新的研究成果。他們透過數碼雕塑及熱化色彩，探討藝術在科學和科技發展過程中的夥伴角色。設計學院唐明晰教授亦相應舉辦一系列有關藝術與科學的講座。多位嘉賓出席了展覽的開幕禮，包括法國駐香港及澳門總領事館科技及學術交流專員夏佳懿博士。

(Left photo on left page) The heir of national non-material cultural asset demonstrates shadow puppet art.
(左頁左圖) 國家級非物質文化遺產項目傳承人展示皮影藝術。

(Right photo on left page) Dr Patrick Callet introduces his exhibit.
(左頁右圖) Patrick Callet 博士講解其展品。

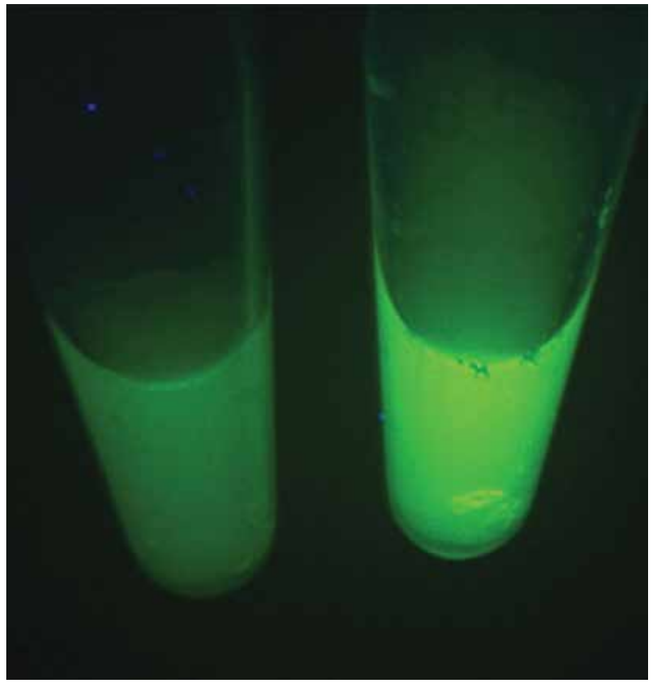
Technology 科技

Fluorescent biosensor detects antibiotic residue in food

螢光生物傳感器檢測食物殘餘抗生素

A novel fluorescent biosensor developed at PolyU uses rapid, sensitive and low-cost probing technology to screen antibiotic residue in food that can be harmful to health.

由理大開發的嶄新螢光生物傳感器，採用快速、靈敏及成本低廉的探針技術，檢測食物中危害健康的殘餘抗生素。



Fluorescein-labelled biosensor in water — the one on the right shows a prominent increase in fluorescence intensity with antibiotics added.
將標記了螢光素的生物傳感器置於水中，加入抗生素後，右瓶顯示的螢光度明顯增強。

Consider a woman who cannot fully recover from an illness after taking prescription medicine for a considerable time. She has been diagnosed as "antibiotic-resistant". She doubts the diagnosis as she rarely takes antibiotics, even when sick. However, an investigation of her diet shows that the antibiotic-resistance has been caused by her daily intake of food that contains beta-lactam antibiotics, also known as antibiotic residue. This is not an isolated case – it is a continuing threat to human health.

一名婦人久經服藥仍無法治癒疾病，她後來被診斷為「抗藥性」。她質疑診斷結果，因為她即使患病，亦甚少服用抗生素。然而，經探究其飲食習慣後，發現她日常的食物中含有不少β-內酰胺抗生素，一般稱為抗生素殘餘物，正是導致抗藥性的主因。這並不是單一個案，而是持續威脅人類健康的問題。

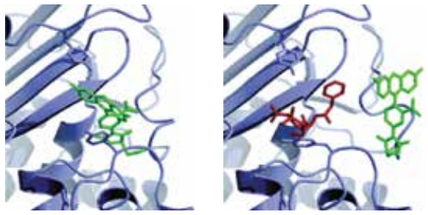
Antibiotics are commonly used in livestock to improve growth and feeding efficiency or to synchronize or control the reproductive cycle and breeding performance. Unwittingly, people take in antibiotic residue such as penicillin and cephalosporin from poultry, meat and other food. Antibiotic abuse and resistance has thus become an increasingly important concern all over the world, and the fast detection of antibiotics in food is of prime importance to public health. Now, an award-winning PolyU project has made a breakthrough in this area.

Prof. Wong Kwok-yin, Dean of the Faculty of Applied Science and Textiles, Prof. Thomas Leung Yun-chung from the Department of Applied Biology and Chemical Technology, and Dr Chan Pak-ho, Associate Director of PolyU's Food Safety and Technology Research Centre, have jointly developed an easy-to-operate biosensor for detecting beta-lactam antibiotics and beta-lactamase inhibitors.

Using probing technology, the biosensor is based on enzymes from pathogenic bacteria. The researchers attached an environmentally sensitive fluorescent molecule to the enzyme that is sensitive to antibiotic concentration as low as 10 nM in water. When beta-lactam antibiotics and beta-lactamase inhibitors exist in food samples, the probe fluoresces. This technology also allows the fine-tuning of fluorescence colours for different purposes.

With a low production cost, the biosensor can be broadly applied to detecting antibiotics not only in food samples but also in blood samples and for high-throughput drug screening to discover new antibiotic components more rapidly and cost-effectively.

This innovation won a Second-Class Award in the "Natural Science category of the Ministry of Education's Higher Education Outstanding Scientific Research Output Awards (Science and Technology)" 2013.



Molecular model of the biosensor
生物傳感器的分子模型

(From left) Dr Chan Pak-ho, Prof. Thomas Leung Yun-chung and Prof. Wong Kwok-yin
(左起) 陳百豪博士、梁潤松教授及黃國賢教授

抗生素常用於家畜以改善生長及飼養速度、同步處理或控制生殖循環及繁育的效率。人們在不知不覺中，從家禽肉類或其他食物中，吸取殘餘抗生素，例如青霉素及頭孢菌素。抗生素的濫用及殘餘物問題因而日趨全球廣泛關注。有見及此，快速檢測食物中的抗生素殘餘物對公眾健康至關重要，而理大一項獲獎發明在這方面已取得一大突破。

應用科學及紡織學院院長黃國賢教授、應用生物及化學科技學系梁潤松教授，以及食物安全及科技研究中心副總監陳百豪博士共同研發出操作簡易的螢光生物傳感器，用作檢測β-內酰胺抗生素及β-內酰胺抑壓劑。

這生物傳感器採用探針技術，利用由致病細菌分泌出來的β-內酰胺酶製成。研究人員把可因應環境改變而調色的螢光份子探測器放入酶中，以檢測濃度低至10nM的水溶性抗生素。若β-內酰胺抗生素及β-內酰胺抑壓劑出現於食物檢測樣本中，探針將露出螢光。這項技術更可供調校螢光顏色以配合不同的檢測用途。

由於製造成本低廉，這生物傳感器不僅可廣泛應用於檢測食物樣本，更可快速地、具成本效益地用於血液樣本及高處理量藥物篩選，以尋找新的抑壓劑。

這項創新發明獲中國教育部頒發二零一三年度「高等學校科學研究優秀成果獎（科學技術）」自然科學二等獎。

Business & Management 工商管理

Subliminal advertising changes product perceptions

潛意識廣告改變產品觀感

> A study has suggested that the human brain makes associations with things unconsciously “seen”, thereby influencing our behaviour when thinking about advertised products.
>
> 一項研究指出，人類腦袋會把一些在無意識中「曾經見過」的事物聯繫起來，從而影響了我們對廣告產品的觀感。

Prof. Gerald Gorn, Chair Professor of Marketing at the PolyU Faculty of Business, and Ms Maria Galli from the Department of Economics and Business at the Universitat Pompeu Fabra in Spain used two experiments to investigate the impact of subliminal advertising on brand perceptions.

In experiment 1, participants were presented on a computer screen with a Chinese ideograph very rapidly paired with the word “black” and another ideograph with the word “white”, with only the words consciously seen. Then, they performed a lexical decision task by seeing a string of letters and indicating instantly whether the string formed a real word. In experiment 2, the participants were asked to designate two potential new brand names (with Chinese ideographs), which had been subliminally paired with black and white in the previous experiment, for either cola or soymilk products.

Results of the experiments showed that attitudinal responses to ideographs (brand names) varied with the appropriateness of their associated attribute for the specific beverage (“black” matching cola and “white” matching soymilk). These findings suggest that semantic associations learned unconsciously have significant and meaningful consequences during brand naming. Even though most participants were not aware of seeing the ideographs, they still unconsciously applied the meaning associated with each of them correctly.

Named the best article in the *Journal of Consumer Psychology* in 2011, the co-authored paper “Unconscious transfer of meaning to brands” based on this study was awarded the Park Outstanding Contributor Award in 2014 by the Society for Consumer Psychology.

Prof. Gerald Gorn
郭澤若教授

理大工商管理學院市場學講座教授郭澤若教授與西班牙龐培法布拉大學經濟及工商管理學系Maria Galli女士合作研究，利用兩個實驗探討潛意識廣告會否影響人對品牌的觀感和看法。

在第一個實驗中，參與者觀看電腦屏幕上先後顯示的「黑」字和「白」字，以及分別附加閃現一個虛構的中文品牌名稱。虛構品牌出現時間迅速，參與者只能有意識地看見「黑」和「白」字。在接著的詞彙決策環節中，他們需隨即表明展現的一串字母能否構成一個真實的字。在第二個實驗中，參與者需要就可樂和豆奶兩種飲品在兩個新品牌名稱中作出選擇，而品牌名稱就是在第一個實驗中曾展示過並配上「黑」或「白」字的那兩個虛構品牌。

實驗結果說明了配對品牌名稱的意識反應會因應指定飲品的聯想屬性的準確度而轉變（與「黑」字相連的品牌名稱配對予可樂；與「白」字相連的品牌名稱配對予豆奶）。在不知不覺中接觸到的字義聯想，對品牌的命名有著重要的影響。研究結果顯示，即使參與者沒意識到曾經見過虛構品牌名稱，但其腦海中無形地把顏色和虛構品牌連繫起來，從而影響他們對品牌名稱的感覺。

二零一一年，兩位研究人員於*Journal of Consumer Psychology*發表了以「Unconscious transfer of meaning to brands」為題的論文，並獲選為最佳論文。該論文更於本年獲得Society for Consumer Psychology頒發的Park Outstanding Contributor獎項。

Smart sensors do wonders for transport and infrastructure safety

智能傳感器 提升運輸及基建安全

From detecting electrical currents on rails to assessing the health of mega-structures and monitoring truck loading, PolyU-developed sensors work to ensure transport and infrastructure safety.

理大開發的傳感器，可應用於檢測鐵路電流、評估大型結構健康，以及監察貨車裝載量，大大提升運輸及基建安全。

Detection of electrical faults in hard-to-access locations

在隱蔽地方偵測電力故障

Tiny sensor for electrical fault detection
用作監測電流的微型傳感器

In response to the call for reliable monitoring activities for electricity transport, Prof. Derek Or Siu-wing and his research team at the Department of Electrical Engineering have developed smart sensors of only 1 mm in thickness to detect electrical currents. The sensor chips can be placed on sensing points of interest such as electrical cables, conductors, junctions and bus bars. Made from rare earth multiferroics with giant magnetoelectric properties, these chips enable the direct detection of magnetic fields generated by electricity and the linear conversion of those fields into electrical voltage signals.

Also known as "self-sustainable magnetoelectric smart sensors", the sensors do not use the power supplies and signal conditioners generally required by traditional current sensors. As they do not have power cords and active electronic components, they can be conveniently, safely and reliably used for early fault detection.

The smart wireless sensors allow the real-time, nonstop monitoring of the health of electrical equipment and can reach hard-to-access locations such as rails, tunnels and underground premises. They are also environmentally sustainable – with energy harvesting technology, electromagnetic radiation emitted by the electrical equipment being monitored can be turned into useful electrical energy.

In future, the research team will be working to make the sensors even more sensitive and reliable in measurement.

為有效監測電力傳輸，電機工程學系柯少榮教授及其研究團隊研發出只有一毫米厚的高智能電流傳感器，只要把它安裝於任何需要監測的位置上，便可量度出該處的電流。該傳感器芯片可接駁感應點如電纜、導體、接合點或母線。芯片以稀土多鐵製成，有巨大的磁電特性，可直接偵測由電力所產生的磁場，並能按線性比例把磁場轉換成電壓信號。

這種「高智能磁電傳感器」不需外接電源和使用信號調節器，有別於傳統電流傳感器。由於它們不含供電線及電子主動元件，所以既方便、安全和可靠，且能有助及早偵測電力故障。

該傳感器能無間斷地對電力設施的健康狀況進行實時監測，亦可安裝於難以觸及的地方如路軌、隧道及地下設施等，更具備能量收集的環保功能，可將由受監測設備釋放出的電磁幅射轉換為有用的電能。

研究團隊未來將進一步改良這傳感器，使之成為靈敏度更高、更可靠的測量工具。

Mega-structure health checks
大型基建健康監測

Sensor network used for structural health detection at the CCTV tower in Beijing
傳感器網絡用於監測北京中央電視台大樓的結構健康

Led by Prof. Cao Jiannong, Chair Professor and Head of the Department of Computing, an interdisciplinary research team has developed a Structural Health Monitoring System that can provide real-time information on the structural health of bridges, high-rise buildings and towers throughout their life cycles.

Adopting “wireless synchronization” and “on-board storage”, this system operates on an intelligent sensor network with two key advantages: radio- and vibration-triggered signals are used for fast and reliable wake-up, and in-network processing yields highly synchronized sensing data for users.

Using this comprehensive and prognostic system, life-cycle screening can be conducted to ensure the safety of mega-structures. Structural damage accumulated over time can be identified and structural health conditions can be assessed immediately after major hazardous incidents.

In recent years, PolyU has implemented the system in mega-structures such as the CCTV tower in Beijing and Hedong Bridge in Guangzhou. The system won a Special Mention Award and Certificate of Merit at the Hong Kong ICT Awards 2013.

電子計算學系講座教授及系主任曹建農教授率領跨領域研究團隊，開發結構健康監測系統，提供橋樑、高樓大廈及塔台等狀況的實時資訊，掌握其在壽命週期的結構健康。

這系統採用「無線同步採樣」及「本地節點存儲技術」，以智能傳感器網絡運作，具備兩大優點：採用無線電及振動觸發的訊號，啟動時更快更可靠；網絡處理為用者提供實時資料。

大型建築物的壽命週期內，可透過這全面且具預測功能的系統作檢測，確保其安全性，以便及早識別積累的結構損毀，還可於重大危險事故後迅速評估結構健康狀況。

近年，理大將這系統應用於多個大型結構項目，如北京中央電視台大樓和廣州鶴洞橋。該系統於二零一三年香港資訊及通訊科技獎中榮獲特別嘉許獎及優異獎。

Real-time monitoring of truck loading
實時監測貨車裝載量

Smart sensors used in monitoring truck loading
用於監測貨車裝載量的智能傳感器

Prof. Jane You, Associate Head of the Department of Computing, and her research team have developed an automated truck loading monitoring system for smart logistics management and road safety control. Integrating smart sensors, mobile communication and global positioning technologies, the system is vehicle-mounted for the convenience of monitoring anytime and anywhere.

Its features include fast truck-status checking, weight recording, loading data transmission, tracking and monitoring, position localization, logistics scheduling, a user interface, security control and emergence management at low cost with high reliability.

This system outperforms similar systems in four main respects. First, it suits any type of truck, whereas other systems can only be installed on trucks with air suspensions. Second, it can be initialized in just two hours versus six to twelve times longer for other systems. Third, it monitors with no distance limitation, whereas other systems only function within 500 foot radii. Fourth, given its low production cost, the system’s price is only 15-25% of its competitors.

Currently used by the government and freight transportation service companies, this invention has clearly demonstrated its advantages and potential to improve traffic control, enhance road safety, reduce maintenance costs in transportation and increase logistics efficiency.

電子計算學系副系主任尤佳教授及研究團隊開發的自動車載監控系統，用作智能物流管理及道路安全控制。這個系統採用了智能傳感器、流動通訊科技及全球定位技術，可裝置於車內，以便隨時隨地進行監測。

系統的功能包括：快速貨車狀況檢查、重量記錄、裝載數據傳遞、追蹤及監測、定位、物流排程、用戶介面、保安控制及緊急事故管理，成本低廉而可靠。

與同類型系統比較，該系統主要有四個優勝之處。第一、它適用於任何貨車種類，而其他系統只供裝置於附有氣壓式懸吊系統的貨車。第二、它的預置時間僅為兩小時，其他系統則需用上六至十二倍的時間。第三、它的監測功能沒有距離限制，其他系統則只限於五百英尺內運作。第四、由於製造成本低廉，其定價只為同類型系統的一成半至兩成半。

這項發明最近廣泛用於政府及貨運服務公司，足證它在改善交通控制、提升道路安全、減低運輸維修成本及提高物流效能方面的優勢及潛力。

Fellow of Royal Academy of Engineering pioneers research at PolyU

皇家工程學院院士於理大開展研究

The Department of Electronic and Information Engineering has a dynamic new Head and Chair Professor determined to meet the world's most perplexing problems head on.

電子及資訊工程學系新任系主任兼講座教授滿懷大志，為面對和解決全球最複雜的難題作好準備。

For Prof. Michael Somekh, problems are challenges eagerly sought. Recently appointed Chair Professor of Biophotonics and Head of the Department of Electronic and Information Engineering, Prof. Somekh is looking to extend the Department's reach through creative, interdisciplinary solutions to both research and teaching.

As Prof. Somekh put it, "knowledge itself does not reside in a single discipline but cuts across the boundaries of traditional disciplines. Electronics and Information Engineering is at the core of nearly all technologies without which systems would simply be impossible to operate, so we are well placed to influence many areas of knowledge."

Michael Somekh教授一向將難題視為其熱切追求的挑戰。作為新任生物光子學講座教授兼電子及資訊工程學系系主任，他期望為研究和教學帶來創新的跨領域解決方案，從而擴大學系的發展空間。

他認為：「知識本身並非存在於單一學科，而是跨越傳統學科界限。電子資訊工程是所有科技發展的核心，亦是眾多系統中不可或缺的一部份，因此我們可於多個知識領域中發揮影響力。」

Yet this will be no easy matter. Prof. Somekh acknowledged that whether dealing with the laws of nature as an engineer or financial and regulatory conventions as an administrator, "we are limited by constraints". The objective should be to "maximize the benefit for the Department/University and community at large by pushing the boundaries". In other words, "we need to take calculated risks to put the Department at the forefront in Hong Kong and beyond".

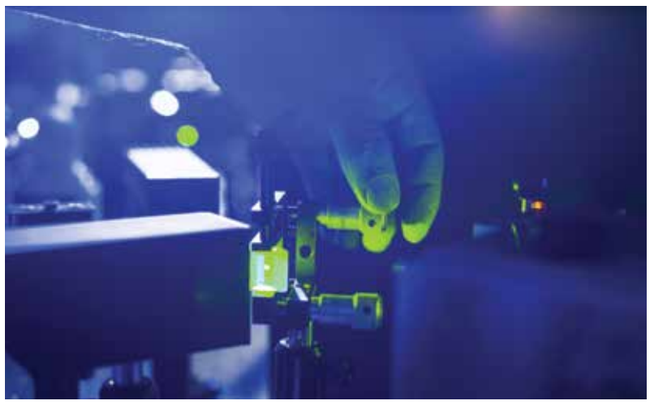
Prof. Somekh arrived at PolyU with impeccable credentials for this sizeable task. Having gained his Master's in Metallurgy and Materials Science from University of Oxford, he received a PhD in Microwave Electronics from the University of Lancaster in 1981. His academic career started at Oxford which preceded a shift to University College London, where he was Director of the Wolfson Unit for Micro-Nondestructive Evaluation. In 1989, he joined the University of Nottingham, where he founded the Applied Optics Group and became Director of the Institute of Biophysics Imaging and Optical Science.

In recognition of his pioneering interdisciplinary work, Prof. Somekh was elected a Fellow of the Royal Academy of Engineering in 2012. At PolyU, he intends that "the Department of Electronic and Information Engineering will make a substantial interdisciplinary contribution, by developing courses and research programmes that link information and electronic engineering to life sciences, physical sciences and even social sciences and business".

Already influential in a group intent on developing optical and photonic research within different faculties, Prof. Somekh is also hoping to "provide the impetus for PolyU to lead major initiatives in photonic and optical science and engineering in many different application areas".

A related item on the agenda is a revamp of the Department's current course offerings. Prof. Somekh is lending an effort to generate new courses to map the Department's cross-disciplinary research agenda and thus "inculcate a culture where students see the broader implications of the discipline". Also, the key, he said, is to "develop a system that allows and values people who make contributions to different aspects of the institution."

Ultimately, Prof. Somekh is concerned with creating an environment of self-confidence so that students and academics alike "can compete with the best and be prepared to face and tackle some of the world's big problems".



然而，這絕非易事。Somekh教授深明，不論他作為研究自然定律的工程師或是從事財政和管理的行政人員，都受不同因素所限制。他遂以「突破界限，讓學系、大學，以及社區實現最大的效益」為目標，估算風險，大膽嘗試，促使學系走在香港及世界的前沿。

Somekh教授擁豐富專業知識和經驗，出掌理大電子及資訊工程學系，任重道遠。他於牛津大學取得冶金和材料科學碩士學位後，於一九八一年獲蘭開斯特大學頒授微波電子哲學博士學位。他最初在牛津開展其學術事業，及後轉往倫敦大學學院工作，並擔任Wolfson Unit for Micro-Nondestructive Evaluation的總監。一九八九年，他加入諾丁漢大學，創辦了應用光學研究組，並出任生物物理成像與光科學研究所所長。

二零一二年，Somekh教授獲選皇家工程學院院士，表揚他在跨領域工作方面所作出的貢獻。加入理大後，他計劃在電子及資訊工程學系開辦課程和研究項目，將資訊及電子工程與生命科學、物理科學，以至社會科學和工商管理聯繫起來。

繼在學院間成立小組發展光學及光子研究之後，Somekh教授進而希望推動理大在光子與光科學及工程的應用方面開創新猷。

Somekh教授的另一期望就是重新檢視學系現有的課程，他致力開辦嶄新課程，以配合學系跨領域研究的方針，從而讓學生體會其專業的廣泛應用性。此外，他認為發展一個促進和重視教職員在不同範疇中作出貢獻的體系是非常重要的。

Somekh教授以建立一個學生與學者都能充滿自信的環境為最終目標，期望提升他們的競爭力，為面對和解決全球性的難題做好裝備。

Transforming hospitality and tourism education

革新酒店及旅遊業教育

(Left) Prof. Kaye Chon (左圖) 田桂成教授

(Right) The Hotel ICON and SHTM complex (右圖) 唯港薈與酒店及旅遊業管理學院大樓

PolyU's School of Hotel and Tourism Management (SHTM) is a world leader in its field, forging ahead with a unique education model thanks largely to the transformative efforts of its Dean and Chair Professor, Kaye Chon.

理大酒店及旅遊業管理學院為業界首屈一指的學府，在院長兼講座教授田桂成教授帶領下，憑藉獨特的教育模式，致力創新變革，昂首邁向未來。

Prof. Chon is a man with a mission. Since joining the SHTM in 2000, he has worked tirelessly to transform it into a world-class teaching and research institution, capable of riding what he has called an "Asian wave" as tourism's centre of gravity shifts to this region.

田教授高瞻遠矚，在二零零零年加入酒店及旅遊業管理學院後，一直孜孜不倦將學院打造成一所世界級的教學和研究院校，使之能配合他形容為旅遊業重心轉移的一股「亞洲浪潮」的發展。

From childhood in South Korea, Prof. Chon harboured a desire to travel and become an hotelier. This led him to the United States, where he gained a BSc from Georgia State University, an MSc from the University of Nevada, Las Vegas and PhD from the Virginia Tech. Having worked in hotel management and as a tourism industry consultant, he was Director of the Tourism Industry Institute at the Conrad N. Hilton College of Hotel and Restaurant Management at the University of Houston before arriving in Hong Kong.

By the time he reached the SHTM, Prof. Chon had gained a reputation as one of leading hospitality and tourism scholars in the world. Aside from many other publications, his co-authored *Welcome to Hospitality: An Introduction* was becoming a standard textbook in its field. He also brought with him the concept of a dawning "Asian paradigm" in hospitality and tourism education that would lead the way for the SHTM to become a global centre of excellence.

That effort paid off by 2009, when the School ranked No. 2 in the world among hospitality and tourism schools based on research and scholarship, according to the *Journal of Hospitality and Tourism Research*. In 2011 came the pinnacle of Prof. Chon's vision with the opening of Hotel ICON, PolyU's teaching and research hotel operating as an extension of the SHTM.

Prof. Chon described the hotel as "a grand vision for our business", and in 2012 the School received the prestigious "McCool Breakthrough Award" for its educational model with the hotel at its centre. Hotel ICON itself has also received numerous awards, including recent recognition from influential travel website TripAdvisor for being a leading hotel in China, and a United Nations World Tourism Organization (UNWTO) Award for Excellence and Innovation in Tourism in January 2014.

Due recognition has also come to Prof. Chon, who was honoured as one of the "Top Ten Hoteliers in China" at the 9th China Hotel Starlight Awards during 2013. This came two years after he received the UNWTO Ulysses Prize, widely regarded as the "Nobel Prize in Tourism".

Yet these accolades would be meaningless if they were not further impetus for the SHTM to continue its educational efforts. It is entirely fitting, then, that the School celebrated its 35th anniversary with a gala dinner at Hotel ICON on 20 May that also served to close the Global Tourism and Hospitality Conference 2014 and 11th Asia Tourism Forum, a student organized and managed dual-conference. Aspiring youth, in Hong Kong as once in Korea, are always the future of hospitality and tourism.

Prof. Chon, then an undergraduate student, as a tourist
大學時期的田教授喜歡到處遊歷

童年時生活在南韓的田教授，盼望到處遊歷和從事酒店業。他追尋自己的夢想，遠赴美國喬治亞州立大學供讀並獲得理學士學位，及後在內華達大學拉斯維加斯分校完成理學碩士課程，以及於弗吉尼亞理工大學取得博士學位。他曾從事酒店管理和擔任旅遊業顧問，在踏足香港之前，田教授曾出任休斯頓大學康拉德・希爾頓酒店及餐飲管理學院的旅遊業研究所所長。

在出掌酒店及旅遊業管理學院之前，田教授早已是業界翹楚，並於國際間享負盛名。他著作眾多，其中他有份合著的《Welcome to Hospitality: An Introduction》更成為餐旅業學科的指定讀本。此外，他積極推動酒店及旅遊業教育的新興「亞洲模式」，帶領學院成為全球卓越典範。

在田教授的努力下，根據《酒店及旅遊研究學刊》於二零零九年發表的研究報告，學院在發表學術研究論文方面全球排名第二。二零一一年，酒店及旅遊業管理學院的延伸部分—教研酒店「唯港薈」正式啟用， 成就了田教授的遠大理想。

田教授形容該酒店為「拓展我們事業的宏觀遠見」。二零一二年，學院獲頒「McCool 突破獎」，表揚學院以教研酒店唯港薈為核心，在酒店及旅遊教育領域取得突破。唯港薈亦屢獲獎項，包括近期被具影響力的旅遊網站TripAdvisor選為中國最佳酒店之一，以及於二零一四年一月奪得聯合國世界旅遊組織頒發的旅遊卓越及創新獎。

田教授本人的成就亦備受認同，他繼獲頒被喻為「旅遊業諾貝爾獎」的聯合國世界旅遊組織尤利西斯獎的兩年後，再於第九屆中國酒店星光獎頒獎禮上獲選為「中國酒店業十大年度人物」。

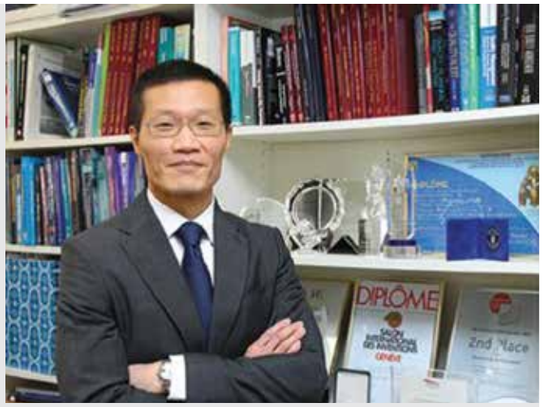
這些嘉許和殊榮進一步推動酒店及旅遊業管理學院的教育工作，因而倍添意義。為慶祝成立三十五週年，學院於二零一四年五月二十日在唯港薈舉行晚宴，並為二零一四年國際旅遊及酒店業會議暨第十一屆亞洲旅遊論壇劃上完滿的句號。這個由學生籌辦的雙會議，正好配合學院教育工作的發展，意義重大。滿懷抱負的香港青年人，像從前來自韓國的田教授般，就是酒店及旅遊業的未來棟樑。

President's Awards celebrate staff excellence
教職員傑出表現獲嘉許

Earlier this year, Dr Calvin Wong Wai-keung and Prof. Lu Qin received President's Awards for Excellent Performance/Achievement in Teaching (Individual) and Service (Individual), respectively. Thirty-six other staff members were also presented Faculty/School Awards for Outstanding Performance/Achievement in recognition of their outstanding achievements in teaching, research and scholarly activities as well as services.

黃偉強博士及陸勤博士早於今年初分別獲頒「校長特設卓越表現/成就獎」中的教學獎及服務獎。三十六名教職員亦獲頒學院特設傑出表現/成就獎，以表彰他們在教學、研究、學術活動及服務方面的出色表現。

Teaching (Individual)
教學獎(個人)



Dr Calvin Wong Wai-keung
Associate Professor and Associate Head
Institute of Textiles and Clothing
紡織及製衣學系副教授及副系主任**黃偉強博士**

Dr Calvin Wong is an inspiring teacher who maximizes student learning. He excels at adopting innovative approaches to strengthening interactive learning environments. In addition to the use of real-life cases, video and hands-on practice, Dr Wong's teaching innovations include the "Technology-based Simulated Fashion Shop" and the "Interactive Team-based Simulation Project". He believes that students not only acquire in-depth subject knowledge but also boost and develop their creativity and critical thinking skills through role-playing in simulated environments. To create a research culture, Dr Wong initiated the "Research Student Seminar Day", which is held every semester for research students, undergraduate students and academics to exchange research ideas and discuss research-related matters.

With a strong belief in teaching-research integration, Dr Wong devotes himself to innovative research for which he has received many local and international awards. He has also published high impact research articles in top-tier journals. One of his publications was ranked by Essential Science Indicators as in the top 1% of the most cited articles in his field.

黃博士致力優化學生的學習過程。他擅於實施創新方法以建立良好的互動學習環境。除了利用現實生活中的例子、視頻和實際操作訓練，黃博士的創新教學法還包括「以技術為本的模擬時裝店」和「互動的團隊模擬作業」。學生通過在模擬環境中進行角色扮演，不僅能夠深入理解學科知識，更可以激發創意和批判思維。為營造研究文化，黃博士亦提出每學期舉行「研究生講座日」，為研究生、本科生和學者提供一個平台，分享研究思維及與研究相關的議題。

黃博士致力創新研究，堅守教研結合的信念，因而為他帶來多個本地及國際獎項榮譽。他多份具影響性的論文亦刊載於頂尖學術期刊上；其中一篇文章更在Essential Science Indicators的引用文獻索引排行榜中位列該學科的首1%。

Services (Individual)
服務獎(個人)

Prof. Lu Qin
Professor and Associate Head
Department of Computing
電子計算學系教授及副系主任**陸勤教授**

Prof. Lu Qin is at the global forefront of encoding Chinese characters in the computing field. Leading an international team of experts from China, Japan, Korea, Vietnam, the UK and the US, Prof. Lu developed the combined International Organization for Standardization and International Electrotechnical Commission 10646, providing over 80,000 Chinese characters that are used by almost all computer platforms. She also pioneered the development of the code set announcement scheme that enables computer systems to display web pages written in different languages. With her contribution and support, the Hong Kong Supplementary Character Set – the first open technical standard developed in the name of the Hong Kong government – is now widely used and supported in all Chinese computer systems in Hong Kong.

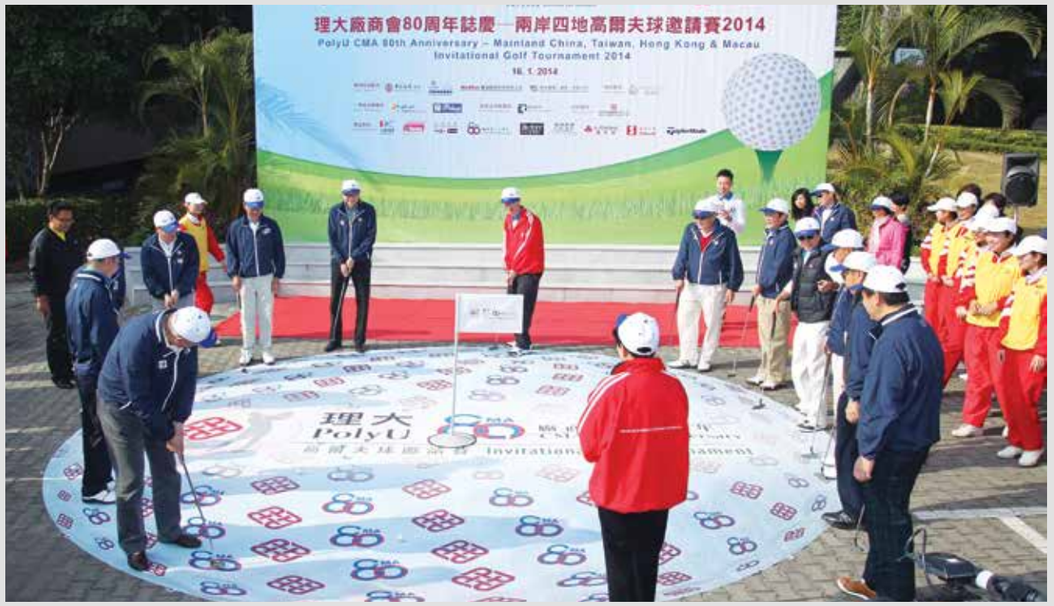
Prof. Lu has received over HK$7 million from the Innovation and Technology Fund to carry out various infrastructure projects that place Hong Kong on solid ground to embrace open system platforms in support of Chinese information processing and interchange. She has also secured funding from the Hong Kong Jockey Club to successfully develop the first Chinese computer interface for the visually impaired using "text-to-speech" technology. Her contributions to the technological development of electronic communications in Chinese for Hong Kong and the Greater China region were deservedly recognized by the Hong Kong government with a Medal of Honour in 2012.

陸教授是中文編碼方面全球領先的專家。在她帶領之下，一支由中國內地、日本、韓國、越南、英國和美國專家組成的國際團隊，開發並結合「國際標準化組織和國際電工委員會10646」，提供逾八萬個幾乎所有電腦平台都可應用的中文字。她更創先河，開發一套以不同語言編寫的網頁而可在不同電腦系統顯示的編碼系統。在香港特區政府編制香港增補字符集方面，陸教授貢獻良多，現時香港所有中文電腦系統已廣泛使用這字符集。

陸教授曾獲創新及科技基金撥款逾七百萬，進行多個項目，支援中文信息處理及轉換，為香港採用開放系統平台，建立鞏固基礎。她亦獲香港賽馬會資助，成功利用「文字到語音」技術，為視障人士開發首個中文電腦界面。她對本港和大中華區的中文電子傳訊科技發展的貢獻功不可沒，因而於二零一二年獲香港政府頒發榮譽勳章。

CMA's donation gives strong impetus to student development

廠商會捐款支援學生發展



PolyU has named a campus building after the Chinese Manufacturers' Association of Hong Kong (CMA) in recognition of CMA's generous donation of HK$30 million in commemoration of its 80th anniversary. The donation will be used for student development, student exchange programmes and "Service Learning" projects.

Earlier on, the University and CMA jointly organized the fundraising "PolyU CMA 80th Anniversary – Mainland China, Taiwan, Hong Kong and Macau International Golf Tournament 2014" with the net proceeds contributed to the development of Service Learning projects.

香港中華廠商聯合會(「廠商會」)為慶祝成立八十周年,慷慨捐款三千萬港元予理大,資助學生發展、交換生計劃及「服務學習」項目。理大以廠商會之名命名校園內一棟大樓,以答謝廠商會的慷慨捐助。

早前,大學與廠商會攜手舉辦「理大廠商會八十周年誌慶—兩岸四地高爾夫球邀請賽2014」。是次球賽籌得的善款在扣除必要開支後,將悉數用作支持「服務學習」項目的發展。

Naming of Lam Chik-ho Lecture Theatre

演講廳以林植豪先生命名

PolyU has named a lecture theatre after the late construction guru Mr Lam Chik-ho, in recognition of his dedication to the promotion of education, infrastructure and medical development in Hong Kong. President Prof. Timothy W. Tong expressed the University's sincere appreciation to Dr Samuel Lam, son of Mr Lam Chik-ho, and the Lam family for their generous donation to PolyU and commitment to philanthropy.

理大將校園內一個演講廳以已故建築界權威林植豪先生之名命名,表彰其對香港的教育、基建及醫療發展的重要貢獻。校長唐偉章教授表示,大學衷心感謝林植豪先生的兒子林柏年醫生及其家族成員對理大發展及慈善公益事業的慷慨支持。

Lecture theatre named after Dr Lee Wan-keung

李運強演講廳命名典禮

A lecture theatre was named after entrepreneur Dr Patrick Lee Wan-keung, as a tribute to his distinguished contribution towards education and development of the University. At the naming ceremony, President Prof. Timothy W. Tong expressed sincere appreciation to Dr Patrick Lee, Mr Raymond Lee, elder son of Dr Lee and Chairman of Lee & Man Paper Manufacturing Limited, and the Lee family for their generous support to PolyU's development.

為表彰企業家李運強博士積極推動教育及理大發展的重要貢獻,大學將一個演講廳以李博士之名命名。命名典禮上,校長唐偉章教授衷心感謝李博士、其長子理文造紙有限公司主席李文俊先生及其他家族成員對理大發展的慷慨支持。

Green Deck — an innovative solution to problems in Cross Harbour Tunnel vicinity

綠洲——解決紅隧周邊問題的創新方案

Green Deck embellishes the district landscape with a green, refreshing sensory experience.
綠洲美化區內景觀，帶來綠化感官新體驗。

Neighbouring the heavily-loaded Cross Harbour Tunnel, PolyU has long witnessed problems in the vicinity — poor air quality, overloaded footbridge, poor connectivity within the district and lack of open space. The University has thus proposed the construction of a Green Deck over the Cross Harbor Tunnel plaza to tackle these problems.

Linking Hung Hom MTR Station Podium on the west and PolyU campus on the south east, the proposed 43,000 sq. m. deck area can accommodate a wide variety of recreational, cultural and sports facilities while solving existing problems in the district. This proposal will not only provide people with a green open space to unwind from the hustle and bustle of city life, but also help foster sustainable development through a number of research projects undertaken by PolyU experts.

The University is soliciting views from various stakeholders to work out a plan that will benefit the community as well as enhance the environment.

理大鄰近繁忙的紅磡海底隧道，一直見證著區內空氣質素欠佳、行人天橋超逾負荷、地區內往來不便，以及缺乏公共空間的種種問題。有見及此，大學提出在紅隧收費廣場上興建一個綠洲，以解決上述問題。

建議中的綠洲約四萬三千平方米，西面連接至紅磡港鐵站，東南面則與理大主校園連接，可供各種康樂、文化及體育設施之用，亦同時解決區內現有的問題。這計劃不但為市民提供一個遠離城市生活煩囂的綠色公共空間，而且透過理大專家的多個研究項目，推動持續發展。

大學正收集不同持份者的意見，以期制定一個既可造福社區，且能優化環境的建議方案。

PolyU ranks among rising young universities worldwide

理大躋身全球年輕優秀大學

PolyU has illustrated its growing global presence in recent years with worldwide recognition. On the Quacquarelli Symonds "Top 50 under 50" list ranking the world's top 50 universities established within the last 50 years, PolyU moved up to the eighth position in 2014. Universities are ranked according to their academic reputation, employer reputation, student-to-faculty ratio, research citations and international student and faculty ratios.

In another ranking exercise, the Times Higher Education "100 under 50" World University Rankings 2014, PolyU rose from 34th to 30th position. The ranking is based on performance in teaching, research, citations, industry income and international outlook of the world's top 100 institutions under 50 years old.

Construction engineering is one of the promising research areas at PolyU. According to a paper entitled "Bibliometric analysis in the international context of the '*Construction and Building Technology*' category from the Web of Science database" published in the international journal *Construction and Building Materials*, PolyU tops the world in the publication of articles related to construction and building technology. In a ranking of over 12,800 institutions and research institutes with publications in the field, PolyU led institutional production with 587 weighted articles between 1997 and 2011. The University has been topping the world in this respect since the 2000/2002 ranking period.

近年，理大在國際間的地位日漸提升，成就備受肯定。在二零一四年的Quacquarelli Symonds全球五十強年輕大學排行榜中，理大晉升至第八位。這排行榜是根據校齡少於五十年的五十強院校之學術聲望、僱主聲望、學生與教學人員比例、研究引文率、國際學生及教學人員比例作評分準則。

此外，在二零一四年《泰晤士高等教育特刊》公布的全球百強年輕大學排行榜中，理大由第三十四位晉升至三十位。這排行榜按一百所成立少於五十年的院校之教學、研究、引文率、產業收入及國際視野方面的表現而排名。

建築工程一直是理大的重點研究學科之一。據一篇在《建築材料學報》刊載題為「網際網路版引用文獻索引資料庫中建築及建造科技類別的全球書目計量學分析」的論文，理大在建築及建造科技領域上發表的論文數量冠絕同儕。在全球逾一萬二千八百所參與建築及建造科技研究的院校和中心的排行榜中，理大在一九九七至二零一一年間發表共五百八十七篇論文，數量領先全球。理大自二零零零/二零零二年間開始已一直穩據榜首。

Engineering experts elected HKAES Fellows

工程專家當選香港工程科學院院士

Three PolyU academics have recently been elected Fellows of the Hong Kong Academy of Engineering Sciences (HKAES) in recognition of their distinguished achievements in serving Hong Kong with top quality engineering expertise. (From left) They are **Prof. Philip C.H. Chan**, PolyU Deputy President and Provost; **Prof. Man Hau-chung**, Dean of the Faculty of Engineering; and **Prof. Teng Jin-guang**, Chair Professor of Structural Engineering and Director of the Research Institute for Sustainable Urban Development.

Earlier this year, Prof. Teng was also bestowed a Second-Class State Natural Science Award in recognition of his achievements in a research project entitled "Behaviour and design of concrete structures strengthened with advanced fibre-reinforced polymer composites" that he conducted in collaboration with Dr Lam Lik of PolyU and two professors from Tsinghua University.

三名理大學者包括（左起）常務及學務副校長**陳正豪教授**、工程學院院長**文効忠教授**，以及土木及環境工程學系講座教授兼可持續發展研究院院長**滕錦光教授**最近當選香港工程科學院院士。是項榮譽是要表揚他們以優秀的工程專業知識服務香港的傑出成就。

今年初，滕教授更獲頒國家自然科學獎二等獎，以表揚他在「高性能纖維增強複合材料加固混凝土結構的力學性能及設計理論」研究中的成就。理大林力博士及兩位清華大學教授亦共同參與是項研究。

Honorary University Fellowships awarded
大學頒授榮譽院士

A special ceremony on 29 January saw eight outstanding individuals awarded with the title of University Fellow in recognition of their significant contributions to PolyU and the community.

一月二十九日，理大向八位傑出人士頒授大學院士榮銜，以表揚他們對理大及社會的卓越貢獻。

1 2 3 4 5 6 7 8

1

Dr Jimmy Tang Kui-ming, *MH*, Founding Chairman and CEO of Prince Jewellery and Watch Company, is a member of the Fund-raising Committee of the PolyU Council and has zealously supported various fund-raising events. In 2013, he donated funds to establish the "Dr Tang Kui-ming Scholarship" for student exchange programmes.

鄧鉅明博士，*MH*
太子珠寶鐘錶公司創辦主席兼行政總裁
鄧博士為理大校董會轄下籌募委員會委員，多次鼎力贊助理大籌款活動。二零一三年，鄧博士捐款成立「鄧鉅明博士獎學金」，資助理大學生參加交流計劃。

2

Mr Johnny Yeung Chi-hung, Founding Chairman and CEO of Fujikon Industrial Holdings Limited, has contributed significantly to the electronics and acoustics industry. He actively helps PolyU to establish collaborations with the commercial and industrial sectors and foster knowledge transfer. He was the second and third President of the CEO Club of the PolyU Institute for Entrepreneurship, and has been serving on the PolyU Fund-raising Committee since 2010.

楊志雄先生
富士高實業控股有限公司創辦主席及行政總裁
楊先生對電子及音響行業的發展貢獻良多。他積極促進理大與工商業界的合作交流，並推動知識轉移。他曾任理大企業發展院的總裁協會第二屆及第三屆理事會理事長，自二零一零年加入理大籌募委員會。

3

Mr Peter Sun Kwok-wah, *MH*, Chairman and Executive Director of Kingdom Holdings Limited, is committed to knowledge transfer and supporting innovation. He collaborated with PolyU to develop an electric vehicle – mycar – and was awarded the Bauhinia Cup Outstanding Entrepreneur Award from the University in 2002.

孫國華先生，*MH*
KFM金德控股有限公司主席兼執行董事
孫先生熱心支持知識轉移和創新，與理大合作研發環保電動車mycar；並於二零零二年獲理大頒發紫荊花杯傑出企業家獎。

4

Ms Belinda Yeung Bik-yiu, Executive Director and Chief Operating Officer of Regal Hotels International Holdings Limited, is also Chairlady of the Industry Advisory Committee of PolyU's School of Hotel and Tourism Management (SHTM). She has shared her experience with PolyU students during "Professor for A Day" sessions and the SHTM Dean's Distinguished Lecture.

楊碧瑤女士
富豪酒店國際控股有限公司執行董事兼首席營運官
楊女士兼任理大酒店及旅遊業管理學院顧問委員會主席。她樂於跟同學分享寶貴經驗，並曾參與「一天教授」講座和院長傑出講座。

5

Mrs Nina Lam Lee Yuen-bing, *MH*, Executive Director of Frankie Dominion (Holdings) Ltd, is a corporate administration and public relations veteran. She has been Deputy Chairman of the Fund-raising Committee of the PolyU Council since 2010 and has given tremendous support to the University's fundraising events.

林李婉冰女士，*MH*
嘉利美商（集團）有限公司執行董事
林女士有多年企業行政及公關經驗。她自二零一零年起擔任理大校董會轄下籌募委員會副主席，並一直鼎力支持理大的籌款活動。

6

Dr Loretta Yam Yin-chun, *BBS*, former Cluster Chief Executive of the Hospital Authority's Hong Kong East Cluster and Hospital Chief Executive of the Pamela Youde Nethersole Eastern Hospital, has made valuable contributions to health services. From 2007 to 2012, she was a member of the PolyU Council and its Finance Committee, and served as a member of the Taskforce for Review of the University's Vision and Mission in 2011.

任燕珍醫生，*BBS*
醫院管理局港島東醫院前聯網總監及
東區尤德夫人那打素醫院前行政總監
任醫生在醫療服務上貢獻良多。她於二零零七年至二零一二年間擔任理大校董會成員，並參與轄下財務委員會的工作。她亦為二零一一年專責檢視理大願景與使命的小組成員之一。

7

Mrs Betty Yuen So Siu-mai, Vice Chairman of CLP Power Hong Kong Limited and Chairman of CLP Nuclear Investment Company, served on the PolyU Council from 2007 to 2013. She has staunchly supported the development of the University through participating in various committees, including the Executive Committee and the 2012/13-2017/18 Strategic Planning Committee.

阮蘇少湄女士
中華電力有限公司副主席兼
中電香港核電投資有限公司主席
阮太一直熱心支持理大發展，曾於二零零七年至二零一三年間出任理大校董會成員，並參與理大校內常務委員會和二零一二／一三年至二零一七／一八年度策略發展委員會等工作。

8

Miss Clarea Au Suet-ming, Founder of CL Group (Holdings) Limited and Chairman of CAAL Capital Limited, has been actively involved in philanthropic activities. She also generously donated funds for the establishment of the "Clarea Au Endowed Professorship in Energy".

歐雪明小姐
昌利（控股）有限公司創辦人及CAAL金融財務公司主席
歐小姐積極參與慈善工作，並捐款成立「歐雪明能源教授席」。

PolyU community participates in staging “Teahouse”

理大社群參與《茶館》公演

(From left) Dr Chung King-fai and Prof. Michael Tse Chi-kong, Chairman of PolyU Culture Promotion Committee
(左起) 鍾景輝博士及理大文化推廣委員會主席謝智剛教授

PolyU's first Artist-in-Residence drama production “Teahouse” was successfully staged in April 2014, marking the climax of collaboration between the Hong Kong Federation of Drama Societies and the Culture Promotion Committee of PolyU. “Teahouse”, a masterpiece of the renowned Chinese novelist and playwright Lao She, was directed by King of Drama Dr Chung King-fai (Artist-in-Residence in 2013/14) and Mr Lee Ming-sum. Over 70 PolyU students and staff joined professional artists and backstage designers in staging this immortal classic drama, which played to a full house of over 5,000.

As part of the collaboration programme, Dr Chung steered a series of workshops at PolyU in areas such as acting, arts administration, stage management and the design of sets, costumes, sound and lighting. Throughout the programme, participating students and staff gained unique hands-on experience in stage performance and backstage production.

本年四月，理大成功上演首個駐校藝術家大型舞台劇《茶館》，口碑載道，更為香港戲劇協會及理大文化推廣委員會的合作掀起高潮。《茶館》為中國著名小說家及劇作家老舍的名作；由二零一三／一四駐校藝術家、戲劇大師鍾景輝博士及李銘森先生聯合執導。逾七十位理大學生及職員聯同專業演員和幕後設計師攜手合作，演出這齣不朽經典劇目，吸引超過五千名觀眾，座無虛席。

是次協作計劃的另一部分是由鍾博士設計一系列工作坊，主題包括：演戲、藝術行政、舞台管理、佈景設計、服裝設計、音響及燈光設計。透過此計劃，參與的學生及教職員獲益良多，汲取了獨特的舞台表演及幕後製作實際經驗。

Green Deck – an innovative solution to problems in Cross Harbour Tunnel vicinity
綠州 — 解決紅隧周邊問題的創新方案

PolyU has proposed the construction of a Green Deck over the Cross Harbour Tunnel plaza to provide recreational, cultural and sports facilities while solving air quality, overloaded footbridge and connectivity problems in the vicinity.
理大提出在紅隧收費廣場上興建一個綠洲，以提供空間供康樂、文化及體育設施之用，並改善區內空氣質素、行人天橋超逾負荷，以及往來不便的問題。

See the full story on pp.39
全文見39頁

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