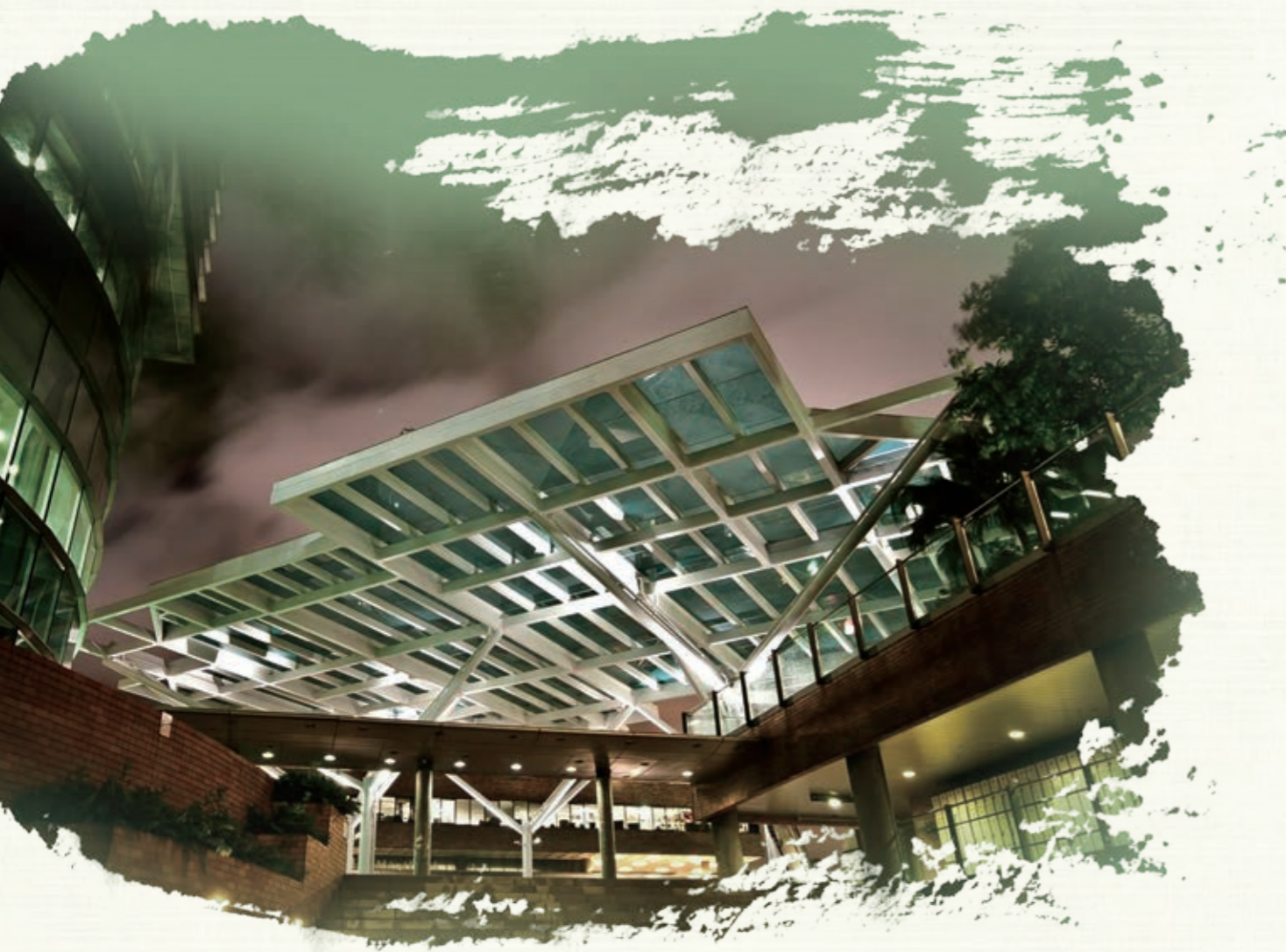


## Recognition and Achievement 獎項與成就



Over the years, PolyU has received various national and regional recognitions for its outstanding and high-quality education and research performance that contribute in sustainable development of the economy, the society and the environment. These remarkable recognitions also demonstrate PolyU's strong commitment in sustainability with regard to campus development, research projects and educational programmes.

理大多年來屢獲殊榮，分別獲得多個國家及地區性獎項，表彰我們在教育和研究領域的優秀表現，及對經濟、社會及環境持續發展的貢獻。這些獎項也肯定了理大在校園發展、研究項目和教育課程方面追求可持續發展的誠志。

## Recognition and Achievement 獎項與成就

### Campus Development with Recognition

PolyU endeavours to bring green elements and designs into all new developments. To prepare for the new four-year degree structure to be commenced in 2012/13 academic year, extensive capital projects have been undertaken on campus. We strive to build and operate new campus facilities in an environmentally sustainable manner. In addition to incorporating "green" elements in campus developments, it is also our target to continue acquiring the recognition from the IAQ (Indoor Air Quality) Certification Scheme for Offices and Public Places, as well as to apply the Building Environmental Assessment Method (BEAM) for all newly built premises so as to reduce their energy, water and material consumptions compared to conventional buildings.

### 校園發展項目屢獲表揚

理大致力於在所有新發展項目加入綠色設計元素。為迎接 2012 年開始實施的全新四年制本科學位課程架構，我們開展了多宗大型的校園建築工程項目。我們希望以環境可持續發展的方式建造和管理新校園設施。除在設施發展項目加入可持續發展元素外，我們盡量採用環保設計，同時繼續參與「辦公室及公眾場所室內空氣質素檢定計劃」，通過檢定取得證書，以及在所有新建樓宇採用「香港建築環境評估法」(BEAM)，藉此將能源、水和物料用量減至低於傳統建築物的水平。



*Delonix Regia* Blooming in May on Campus  
五月校園，鳳凰木花開燦爛

## Recognition and Achievement 獎項與成就

The following table outlines the major recognitions that we have received during the reporting year with regard to campus development.

### Recognitions to PolyU's Sustainable Campus Development 理大校園可持續發展所獲的獎項 (per alphabetic order 以英文首字母排序)

Office/Building 辦公室／建築物	Name of Award 獎項	Organizer of Award 獎項組織者
Campus Development Office 校園發展處	Top 10 Developers Awards 2011 2011 年十大最佳發展商獎	BCI Asia & Autodesk
Glass Canopy at the Chan Sui Kau and Chan Lam Moon Chun Square (Former The Skynet @ Logo Square) & Courtyard Cafe (MN Wing) 陳瑞球林滿珍伉儷廣場（前校徽廣場天幕）及廣場咖啡廳（MN 翼）玻璃篷	2011 China's Most Successful Design Awards – Successful Design Award 2011 年度最成功設計大賽－最成功設計獎	Shanghai Industrial Design Association and Shanghai Creative Industry Center 上海工業設計協會、上海創意產業中心
	HKDA Global Design Awards 2011 – Successful Design Award – Hong Kong Best and Merit (Spatial) 2011 年香港設計師協會環球設計大獎－成功設計獎－香港最佳設計獎及優異獎（空間）	Hong Kong Designers Association (HKDA) 香港設計師協會
Hotel ICON (Former Redevelopment of Pak Sui Yuen) 唯港薈（前百粹苑重建項目）	Design For Asia Award 2011 – Merit Recognition for Environmental Design (Hospitality and Leisure Spaces) 亞洲最具影響力設計大獎 2011 之「環保設計優異獎」	Hong Kong Design Centre 香港設計中心
	HA+D Green Plus Awards for Sustainable Project – Hotel Interior Design Project (2012) 「HA+D Green Plus Awards」可持續項目－酒店室內設計項目	HA+D
	Highly Commended New Hotel Construction & Design Hong Kong 香港新酒店最佳建築及設計獎	International Hotel Awards 2012 2012 年度國際酒店大獎
	Interiors 2011 – Merit Award 2011 年優秀室內設計獎優異獎	The American Institute of Architects Hong Kong Chapter 美國建築師學會香港分會

下表列出我們的校園建造項目於匯報期內所榮獲的重要獎項。

## Recognition and Achievement 獎項與成就

Office/Building 辦公室／建築物	Name of Award 獎項	Organizer of Award 獎項組織者
Innovation Tower 創新樓	Autodesk Hong Kong BIM Awards 2011 2011 年 Autodesk 香港建築信息模擬設計大獎	Autodesk
The Teaching Hotel Complex (Former Redevelopment of Pak Sui Yuen) 教學酒店綜合大樓（前百粹苑重建項目）	HKIA Medal of the Year of Hong Kong (2011) 香港建築師學會全年境內建築大獎	The Hong Kong Institution of Architects (HKIA) 香港建築師學會
	Quality Building Award 2012 – Merit (Hong Kong Non-Residential [New Building] Category) 2012 年優質建築大獎－優異獎（香港非住宅〔新建築物〕類別）	The Hong Kong Construction Association 香港建造商會， The Hong Kong Institute of Architects 香港建築師學會， The Hong Kong Institute of Construction Managers 香港營造師學會， The Hong Kong Institution of Engineers 香港工程師學會， The Hong Kong Institute of Housing 香港房屋經理學會， The Hong Kong Institute of Surveyors 香港測量師學會， The Hong Kong Chapter of International Facility Management Association 國際設施管理協會香港分會， The Hong Kong Quality Assurance Agency 香港品質保證局，and The Real Estate Developers Association of Hong Kong 香港地產建設商會
	Skyrise Greenery Awards 2012 – Silver (Non-Government Organization/ Institution Projects) 2012 年高空綠化大獎－銀獎（非政府組織／院校項目）	Greening, Landscape and Tree Management Section of Development Bureau 發展局綠化、園境及樹木管理組

## Indoor Air Quality Certification Scheme for Offices and Public Places – Good Class

## 辦公室及公眾場所室內空氣質素檢定計劃 – 良好級

(per alphabetic order 以英文首字母排序)

Building 建築物	Certified Location(s) 已檢定地點
Choi Kai Yau Building and Shirley Chan Building 蔡繼有樓和陳鮑雪瑩樓	Whole Building 整棟建築物
Chow Yei Ching Building, Ng Wing Hong Building and Communal Building 周亦卿樓、伍永康樓和文康大樓	Whole Building 整棟建築物
Chung Sze Yuen Building 鐘士元樓	Chiang Chen Studio Theatre 蔣震劇院
Chung Sze Yuen Building, BC Wing and Block A 鐘士元樓、BC翼和A座	Whole Building (Excluding Chiang Chen Studio Theatre) 整棟建築物 (蔣震劇院除外)
Jockey Club Auditorium 賽馬會綜藝館	Whole Building 整棟建築物
Kinmay W. Tang Building, Stanley Ho Building and GH Wing 唐溫金樓、何鴻燊樓和GH翼	Whole Building 整棟建築物
Lee Shau Kee Building 李兆基樓	G/F to 9/F 地下至九樓
Li Ka Shing Tower and N Block 李嘉誠樓和N座	Whole Building 整棟建築物
Mong Man Wai Building and Anita Chan Lai Ling Building 蒙民偉樓和陳麗玲樓	Whole Building 整棟建築物
Pao Yue Kong Library 包玉剛圖書館	Whole Building 整棟建築物
Shaw Sports Complex, Shaw Amenities Building and Fong Shu Chuen Hall 邵逸夫體育館、邵逸夫樓和方樹泉堂	Whole Building 整棟建築物
Tand Ping Yuan Building, Chan Tai Ho Building, Lui Che Woo Building, Chan Sui Wai Building and CD Wing 唐炳源樓、陳大河樓、呂志和樓、陳瑞槐樓和CD翼	Whole Building 整棟建築物
Yip Kit Chuen Building, Realink Building and Industrial Centre 葉傑全樓、匯信樓和工業中心	Whole Building of Yip Kit Chuen Building, Office Area of Realink Building and Industrial Centre 葉傑全樓整棟、匯信樓和工業中心辦公區域

Innovation Tower Recognized by the Autodesk  
Hong Kong BIM Awards 2011

As a new site located at the previous Keith Legg Sports Pavilion and Basketball Court, the on-going development of Innovation Tower is anticipated to provide a total accommodation net floor area of about 15,000 m<sup>2</sup>, offering a range of teaching facilities such as classrooms, offices, studio, laboratories, resource centre, exhibition and design gallery.

By applying the technology of building information modeling (BIM), Innovation Tower has successfully integrated the green and sustainable concept into the building design, and received the recognition by the Autodesk Hong Kong BIM Awards 2011. Entering its fifth consecutive year in 2011, the Autodesk Hong Kong BIM Awards organized by Autodesk Far East Limited celebrated the local building industry professionals and educators who drove transformation of the industry with BIM, especially applying BIM innovatively in building a greener and more sustainable environment for the public.

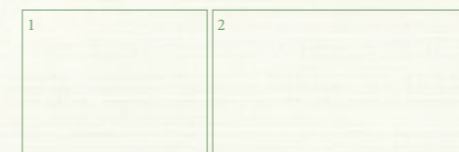
創新樓榮獲 2011 年 Autodesk  
香港建築信息模擬設計大獎

創新樓的選址原為李格致體育館及籃球場，發展項目仍在進行中，估計落成後實用樓面面積約達 15,000 平方米，提供多元化的教學設施，包括課室、寫字樓、工作室、實驗室、資源中心、展覽館及設計廊。

大樓採用建築資訊模型技術 (BIM)，成功將可持續發展環保概念融入建築設計，憑着傑出創意奪得 2011 年 Autodesk 香港建築信息模擬設計大獎。Autodesk 香港建築信息模擬設計大獎由 Autodesk Far East Limited 主辦，今年已是第五屆，以表揚善用 BIM 技術推進業界轉型的本地建造從業員和教育工作者，其中特別表彰以創新手法應用 BIM 技術為公眾建造更環保、更可持續發展環境的出色典範。



Innovation Tower - Artist's Impression  
創新樓 — 虛擬環境圖



1. External View from Chatham Road  
大樓漆咸道立面的外貌
2. Preserved Trees and Jogging Track in the Ground Floor Plaza  
地下廣場保留的樹木和緩跑徑

### Former Redevelopment of Pak Sui Yuen Received the Skyrise Greenery Awards

The whole redevelopment is recognized by its outstanding design which highlights green and sustainable features, the Teaching Hotel Complex of PolyU (Redevelopment of Pak Sui Yuen) has been recognized with Silver Award of the Skyrise Greenery Awards 2012.

Recognizing urban greening design being a worldwide trend, the Skyrise Greenery Awards are organized by the Greening, Landscape and Tree Management Section of the Development Bureau, aiming to promote skyrise greening, foster public appreciation of exemplary projects, and promote its wider adoption in Hong Kong. The Teaching Hotel Complex comprises three parts which are Hotel ICON, School of Hotel and Tourism Management, and the University House. It features a unique design of a three-storey high interior green wall inside the main entrance lobby. The building encompasses different kinds of green features such as a green wall, green roof and terrace; these green features integrate with the modern architecture of the hotel complex.



### 前百粹苑重建項目榮獲高空綠化大獎

整個理大教學酒店綜合大樓重建項目（前百粹苑重建項目）的設計非常出眾，設有多項環保及可持續發展特色，勇奪 2012 年高空綠化大獎—銀獎。

高空綠化大獎是發展局綠化、園境及樹木管理組主辦的年獎，旨在迎合市區綠化設計的國際化趨勢，希望推廣高空綠化，倡導公眾欣賞模範項目，促進香港各類建築物進行高空綠化。理大的教學酒店綜合大樓分為三部份：唯港薈、酒店及旅遊業管理學院和大學樓，設計饒富特色，主入口大堂以樓高三層的室內綠化牆作為焦點，大樓內的環保持色林林總總，例如綠化牆、綠化屋頂及陽台，完美配合酒店綜合大樓的時尚外型。

The Teaching Hotel Complex  
教學酒店綜合大樓

### Award-winning Research Projects

With the continuous dedicated effort and tremendous support of the University, PolyU's research teams have won various prestigious awards locally and internationally due to their ground-breaking innovations which are valuable for the long-term development of the society and the environment. Examples of these research projects and recognitions are listed as follows.

### 獲獎研究項目

理大在學術研究方面不遺餘力，研究團隊在校方全力支持下，多次取得創新突破，對社會及環境的長遠發展作出重要貢獻，更因此奪得多項本地和國際大獎。這些研究項目和獎項摘要如下。

#### PolyU's Award-winning Research Achievements (per alphabetic order) 獲獎的理大研究成果（以英文首字母排序）

Invention 發明	Name of Award 獎項	Organizer of Award 獎項組織者	Inventors 發明人
"BrailleWise", the accessible aircraft lavatory for the visually-impaired 「BrailleWise」，專為視障人士設計的飛機共融衛生間	2012 Successful Design Awards – China – Diamond Award 2012 年最成功設計大賽—鑽石獎	Shanghai Industrial Design Association and Shanghai Creative Industry Center 上海工業設計協會、上海創意產業中心	Professor Michael Siu (Leader of Public Design Lab, School of Design) 邵健偉教授（理大設計學院理公共設計室主任）
	Perspective Award 2012 – Certificate of Excellence 2012 年透視設計大獎優異獎	Perspective	
"KineLabs", rehabilitation games for the elderly people and persons after stroke 「KineLabs」免費軟件平台，為長者及中風患者提供三種運動遊戲，提升他們的反應和運動能力	Hong Kong ICT Awards 2012: Best Innovation & Research Award – Silver 2012 年香港資訊及通訊科技獎：最佳創新及研究獎—銀獎	The Hong Kong Information Technology Federation 香港資訊科技商會	Dr Raymond Tong Kai-yu, Dr Fong Ching-hang, Mr Lawrence Chong Kwok-wai and Mr Nathan Lam Kim-fung 湯啟宇博士領導方靖行博士、莊國偉先生及林劍峰先生
"RFID-based Apparel Management Expert (RAME) System" which can help apparel industry to increase their production efficiency by 20 percent and achieve much cost-saving 「RFID-based Apparel Management Expert System」(RAME 系統) 成衣生產管理方案提高成衣生產商的生產效率達兩成，並降低生產成本	Hong Kong Radio Frequency Identification Technology (RFID) Awards 2012 – Gold Award (Innovative Use of RFID Technology) and Silver Award (Best Implementation of RFID Technology) 2012 年香港無線射頻識別 (RFID) 大獎—「無線射頻識別技術創新應用獎」金獎及「最佳無線射頻識別技術應用獎」銀獎	GS1 Hong Kong 香港貨品編碼協會	Associate Professor Dr Calvin Wong Wai-keung (Institute of Textiles and Clothing) 副教授黃偉強博士（紡織及製衣學系）

## Recognition and Achievement 獎項與成就

Invention 發明	Name of Award 獎項	Organizer of Award 獎項組織者	Inventors 發明人
Smart Electrical Vehicle Charging Station 智能式電動車充電站	Most Successful Design Awards – China – Successful Design 2012 2012 年最成功設計大賽 – 最成功設計獎	Shanghai Industrial Design Association and Shanghai Creative Industry Center 上海工業設計協會、上海創意產業中心	Prof. Michael Siu (PolyU's Public Design Lab), in collaboration with the Department of Electrical Engineering, Facilities Management Office and Industrial Centre
	Spark Concept Award 2012 – Bronze Award 「Spark Concept Award 2012」銅獎	Spark	邵健偉教授 (理大公共設計室) 聯同電機工程學系、物業管理處和工業中心研發
“Oops!” - transfer of surplus and wasted building materials from the interior design industry to be used by visual arts students in secondary schools for creative purpose Oops! 團隊將室內設計行業所剩餘的建材和建築廢物轉移，供應給視覺藝術中學生作創作用途	Hong Kong Social Enterprise Challenge (HKSEC) 2011 – Championship 2011 年香港社會企業挑戰賽 (HKSEC) – 冠軍	Center for Entrepreneurship, the Chinese University of Hong Kong 香港中文大學創業研究中心	Team Leader: Joyce Chu Yin-chi; Team Members: Keziah Law Ka-pui; Irix Leung Cheuk-nga; Wong Ka-ki; Advisor: Mr Patrick Chan Kai-ching 組長：朱英姿 組員：羅家佩、梁卓雅、黃家琪 顧問：陳啟晶先生
“Woof” – use of Chiengora – (animal fibres from doggies) for making fashion and accessories to raise human compassion and empathy and change their attitudes towards animals Woof 社企採用狗毛纖維製作服裝及配飾，提高人們對動物的憐愛與同情，改變他們對動物的態度	Hong Kong Social Enterprise Challenge (HKSEC) 2011 – Championship 2011 年香港社會企業挑戰賽 (HKSEC) – 冠軍	Center for Entrepreneurship, the Chinese University of Hong Kong 香港中文大學創業研究中心	Team Leader: LAM Mun Yee, Anita; Team Members: CHAN Hiu Nam, Amy (HKBU); LOK, Margaret; Advisor: Mr. R�mi LECLERC 組長：林敏兒 組員：陳曉嵐 (香港浸會大學)、樂美怡 顧問：祈尚思先生

## Recognition and Achievement 獎項與成就

### 40<sup>th</sup> International Exhibition of Inventions of Geneva (2012) 2012 年第 40 屆日內瓦國際發明展

Invention 發明	Name of Award 獎項	Inventors 發明人
3D Ultrasound Imaging for Spine Scoliosis 三維超聲脊柱側彎評估	Gold Medal and Mau Award for the Best Educational Innovation from Mehr Alborz University in I.R.IRAN 金獎及伊朗大學特別大獎	Prof. Zheng Yong-Ping (Interdisciplinary Division of Biomedical Engineering) 鄭永平教授 (生物醫學工程跨領域學部)
A Novel Inline Hydropower System for Power Generation from Water Pipelines 內聯閉式輸水管水力發電系統	Silver Medal 銀獎	Prof. Yang Hong-Xing, Mr. Chen Jian and Dr. Lu Lin (Department of Building Services Engineering) 楊洪興教授、陳建先生及呂琳博士 (屋宇設備工程學系)
A Novel QPAR Technique for Extracting Valuable Information from Herbal Medicines QPAR：提取中藥內隱藏珍貴訊息的創新技術	Gold Medal 金獎	Prof. Chau Foo-Tim (Department of Applied Biology and Chemical Technology) and Dr. Daniel Sze Man-Yuen (Department of Health Technology and Informatics) 周福添教授 (應用生物及化學科技學系) 及施文遠博士 (醫療科技資訊學系)
Functional and Decorative Textile Products through Sputtering Technology 功能性與裝飾性的濺射鍍紡織產品	Silver Medal and Special Award from Romanian Association for Nonconventional Technologies, Bucharest, Romania 銀獎及羅馬尼亞創新科技協會特別大獎	Dr. Kinor Jiang (Institute of Textiles and Clothing) 姜綏祥博士 (紡織及製衣學系)
Hygienic Socks with Antifungal Microcapsules for Patients with Tinea Pedis (Athlete's foot) 採用微膠囊技術研發治療足癬 (香港腳) 的衛生襪	Gold Medal and Special Prize (Gold Medal from Association “Russian House for International Scientific and Technological Cooperation”) 金獎及俄羅斯內務國際科學技術合作協會特別獎 – 金獎	Prof. Marcus Yuen Chun-Wah, Dr. Joanne Yip Yiu-Wah (Institute of Textiles and Clothing) 袁進華教授、葉曉雲博士 (紡織及製衣學系)
Lead-free Ferroelectrics Based Microrefrigerator 基於無鉛鐵電材料的微型製冷器	Gold Medal 金獎	Dr. Zheng Guang-Ping (Department of Mechanical Engineering) 鄭廣平博士 (機械工程學系)
Preparation of Selenium Nanoparticles with Strong Anti-Tumor Activity Using Tiger Milk Mushroom 利用虎奶菇製備抗腫瘤納米硒	Gold Medal and The Prize of the Chinese Delegation 金獎及中國代表團獎	Dr. Wong Ka-Hing, Department of Applied Biology and Chemical Technology 黃家興博士 (應用生物及化學科技學系)

### 39<sup>th</sup> International Exhibition of Inventions of Geneva (2011) 2011 年第 39 屆日內瓦國際發明展

Invention 發明	Name of Award 獎項	Inventors 發明人
A Novel Optical Method for Retarding Myopia Progression 放緩近視增長的嶄新技術	Grand Prize and Gold Medal with Jury's Commendation 特別大獎及評審團嘉許金獎	Prof. To Chi-Ho, Prof. Carly Lam Siu-Yin (School of Optometry) 杜嗣河教授、林小燕教授 (眼科視光學院)
An Innovative Secured Retinal Imaging System for Computer Aided Non-intrusive Diabetic Care 新一代安全可靠用於非侵入式糖尿病監護的視網膜圖像系統	Special Prize and Gold Medal with Jury's Commendation 特別獎及評審團嘉許金獎	Prof. Jane You Jia (Department of Computing) 尤佳教授 (電子計算學系)
Ecodesign and Green Manufacturing Model for Electrical and Electronic Products under EuP Directive 耗能產品生態化的綠色製造流程與設計	Silver Medal 銀獎	Dr Winco Yung Kam-Chuen (Department of Industrial and Systems Engineering) 容錦泉博士 (工業及系統工程學系)
Quick Test System of Formaldehyde in Textiles and Clothing 快速紡織物及布料甲醛測試系統	Silver Medal 銀獎	Prof. Hu Jinlian (Institute of Textiles and Clothing) 胡金蓮教授 (紡織及製衣學系)
Novel Activated Sludge Eco-Bricks Manufacturing Technology 新型活性污泥環保磚生產技術	Silver Medal 銀獎	Prof. Chua Hong (Department of Civil and Structural Engineering) 蔡宏教授 (土木及結構工程學系)
Portable Real-time DNA Biosensor 便攜式基因 (DNA) 即時感測器	Gold Medal 金獎	Prof. Samuel Lo Chun-Ip (Department of Applied Biology and Chemical Technology) and Dr. Derek Or Siu-Wing (Department of Electrical Engineering) 盧俊立教授 (應用生物及化學科技學系) ; 柯少榮博士 (電機工程學系)
Solar Powered Air Conditioning System for Vehicles 太陽能供電的汽車空調系統	Special Prize and Silver Medal 特別獎及銀獎	Prof. Eric Cheng Ka-Wai (Department of Electrical Engineering and Green Power Industrial Limited) 鄭家偉教授 (電機工程學系及陽光動力有限公司)

Under the patronage of the Swiss Federal Government, the State and the City of Geneva and the World Intellectual Property Organization, the annual event of the International Exhibition of Inventions of Geneva is regarded as one of the most important platforms to present new inventions from around the world.

In year 2011 and 2012, PolyU's research teams were honoured to receive a number of prestigious awards at this annual event for innovations to **enhance the general welfare of the society** and **help to sustain the environment**. Some of these award-winning research projects are illustrated below.

每年一度的日內瓦國際發明展由瑞士聯邦政府、日內瓦州政府、日內瓦市政府，及世界智慧財產組織協辦，是全球最重要的展覽平台之一，展示來自世界各地的最新發明。

理大的研究團隊於 2011 及 2012 年繼續致力於增進社會整體福祉和促進環境可持續發展，憑着佳績連續於日內瓦國際發明展中榮獲多項創新大獎。以下是一些獲獎研究項目。

### Enhancing the General Welfare of the Society

#### 3D Ultrasound Imaging for Spine Scoliosis – Gold Medal and Mau Award for the Best Educational Innovation from Mehr Alborz University in I.R.IRAN (2012)

In the past, X-ray imaging is often used to diagnose spine deformity. However, X-ray may pose radiation hazards to patients, especially female adolescents. Based on ultrasound technology, a 3D imaging system has been developed by our biomedical researchers to perform measurement and evaluation of spine without using radiation. Besides providing mobility features for easy installation, the system allows patients to take 3D ultrasound measurement on spine as frequently as required without worrying about potential exposure to radiation.

### 增進社會整體福祉

#### 三維超聲脊柱側彎評估 – 金獎及伊朗大學特別大獎 (2012)

過去脊柱側彎一般用 X 光成像作診斷，但 X 光的輻射會對病人構成危害，尤其是年輕女性風險更大。我們的生物醫學研究人員基於三維超聲成像技術，開發了一套無輻射的脊柱側彎量度及評估系統。這套系統除了易於安裝及方便移動之外，還可經常使用，病人毋須憂慮輻射的潛在危險。



3D ultrasound imaging for spine Deformity  
3D 脊柱側彎超聲成像

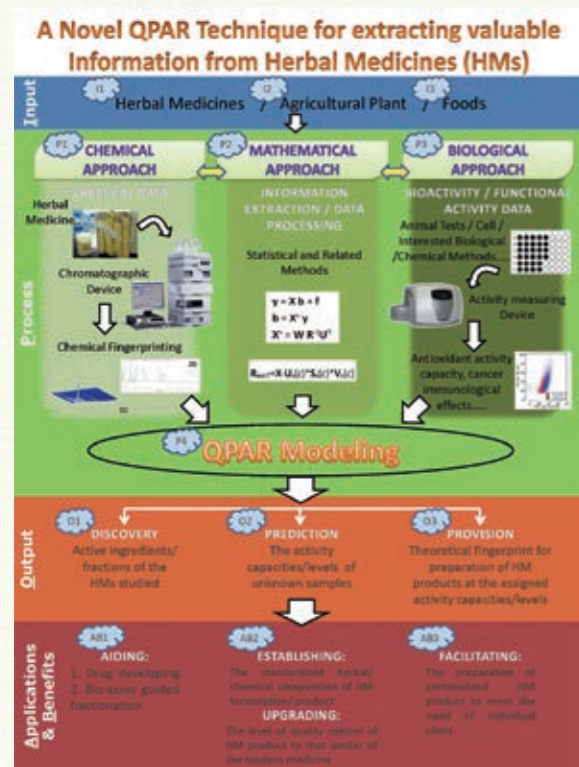
Recognition and Achievement  
獎項與成就

**A Novel QPAR Technique for Extracting Valuable Information from Herbal Medicines – Gold Medal (2012)**

A novel quantitative-pattern-activity-relationship (QPAR) technique has been introduced by PolyU researchers aiming to answer key issues when studying the effectiveness of complex herbal medicines. QPAR not only can reduce the required analysis time and costs, it also helps to predict overall functional activity of herbal medicines based on the chromatographic profile and identify particular features associated with the activity. Besides herbal medicines, QPAR may also be utilized to analyze bioactive, functional or toxic ingredients in food and agricultural plants, to benefit the general public.

**QPAR：提取中藥內隱藏珍貴訊息的創新技術－金獎 (2012)**

理大研究人員發明的量化模式與生物活性關係 (QPAR) 創新技術，可解決研究中藥複合物成效時遇到的難題。QPAR 不僅節省分析時間和成本，還可根據色譜圖譜預測草本中藥的整體功能活性，以及界定與活性有關的特點。除了評估中藥，QPAR 亦可分析食物和農作物的生物活性，功能或毒性成份，造福大眾。



System Diagram  
系統圖



Herbal Medicines  
中草藥樣本

Recognition and Achievement  
獎項與成就

**Preparation of Selenium Nanoparticles with Strong Anti-Tumor Activity Using Tiger Milk Mushroom – Gold Medal and The Prize of the Chinese Delegation (2012)**

Due to its excellent anti-tumor activity and low toxicity, selenium nanoparticles (SeNPs) have attracted more and more attention. However, SeNPs can aggregate easily to reach beyond nano-size and lose their anti-tumor activity significantly. By using the polysaccharide-protein complexes (PSP) extracted from tiger milk mushroom, SeNPs were successfully prepared with a high level of stability. It was found that the SeNPs generated by this novel method could prevent the growth of certain human breast cancer cells, while causing no harm to the normal body cells.

**利用虎奶菇製備抗腫瘤納米硒的嶄新方法－金獎及中國代表團獎 (2012)**

納米硒 (SeNPs) 由於具有抗腫瘤活性強及毒性低等特質，近年成為新的研究焦點。然而，納米硒的納米粒子極易聚集以致超過納米尺度，導致抗腫瘤活性大大減低。我們成功利用虎奶菇菌核提取多糖蛋白複合物，製備出高穩定性的納米硒。初步研究發現以這種新方法穩定化的納米硒能抑止某些人類乳癌細胞生長，而對正常細胞則幾乎沒有損害。



Recognition of the New SeNPs Preparation Method  
at 2011 International Conference on Food Factors  
嶄新納米硒配製方法於 2011 國際食品保健因子大會獲得嘉許

**A Novel Optical Method for Retarding Myopia Progression – Grand Prize and Gold Medal with Jury’s Commendation (2011)**

Many people worldwide suffer from myopia (short-sightedness) from an early age. Unfortunately, there is lack of clinically approved method for controlling its progression in children and youth. Researchers from the School of Optometry have introduced a new multi-zone bifocal soft contact lens named “DISC”, which can offer users with clear vision at all viewing distances as well as constant optical defocus to prevent short-sightedness. Without relying on medicine or surgical operation, the initial application study among Hong Kong schoolchildren (age of 8-13) demonstrated its effectiveness in reducing myopic progression by 50%.

**放緩近視增長的嶄新技術 – 特別大獎及評審團嘉許金獎 (2011)**

許多近視患者從小視力便出現問題，遺憾的是目前尚未有醫學認可的方法控制兒童及青少年近視增長。理大眼科視光學院的研究人員發明了一種名為 DISC 的嶄新多區域雙光軟性隱形眼鏡，不論視覺距離如何亦能保持視力清晰，並有光學離焦功能預防近視。新技術毋須藥物或手術，在初步應用研究中，參與的香港學童 (8-13 歲) 近視增加減緩 50%，成效理想。



Local Schoolchildren Tried on the DISC Lens  
本港學童試戴 DISC 隱形眼鏡

**Helping to Sustain the Environment****A Novel Inline Hydropower System for Power Generation from Water Pipelines – Silver Medal (2012)**

Underground water pipe network needs to be monitored constantly to ensure reliable water supply to the city. To operate monitoring devices in remote areas without power grid can be very challenging. A hydro power system invented by PolyU can convert the superfluous water flowing through the pipe into electric power. Owing to its compact size, the system can be fitted in the limited space often found in city underground. The system has already been applied at several locations by Water Supplies Department of the Hong Kong SAR Government, providing renewable and continuous power to support real-time water pipe monitoring.

**促進環境可持續發展****內聯閉式輸水管水力發電系統 – 銀獎 (2012)**

地下水管網絡必須經常監察，以確保穩定的城市供水，可是在未接駁公眾電網的偏遠地區操作監察設備是一件困難的事。理大發明的水力發電系統可將流過水管的水能轉化為電力，而且體積細小，適合在市區常見的地底狹窄空間使用。香港特區政府轄下的水務署已在多個地點試用此新系統，提供不間斷的可再生電源進行實時水管監察。



Hydro Generator System Installed in Narrow Underground Space  
在狹窄的地下空間安裝水力發電系統



**Lead-free Ferroelectrics Based Microrefrigerator – Gold Medal (2012)**

Microrefrigerators are used for cooling high-power microelectronic components, and have application potential in making lightweight refrigerators or air conditioners. The conventional vapor compression technology requires Freon or its alternatives, creating a negative effect on the ozone layer surrounding the earth. The lead-free ferroelectric microrefrigerators introduced by a research team at PolyU provides a more environmentally friendly refrigeration technology than the conventional method. These microrefrigerators can achieve energy efficiency of 86% and consist of electro-caloric refrigeration units whose size is 0.5 to 2 mm. The refrigerants are lead-free and can achieve a refrigeration effect over 4J/g under designated voltage.

**Solar Powered Air Conditioning System for Vehicles – Special Prize and Silver Medal (2011)**

A research team at PolyU has invented an innovative solar power system that can be installed on any type of vehicle. This solar power system, when combined with other energy-saving techniques such as variable speed drive for air-conditioning and dual power control, is able to supply sufficient electricity to run electronics and air-conditioning onboard for long hours when the engine is switched off. It is estimated that after using such a renewable energy system, a vehicle operating 6 hours per day can reduce about 4 tonnes of carbon emissions per year.



Solar Power System Installed on Vehicle  
汽車裝設太陽能系統

**基於無鉛鐵電材料的微型製冷器 – 金獎 (2012)**

微型製冷器可用於冷卻高功率微型電子元件，並可能適用於製造輕型雪櫃或空調器。傳統的蒸汽壓縮技術使用氟利昂 (Freon) 或其替代品，對圍繞地球的臭氧層構成損害。理大研究人員發明的無鉛鐵電材料製冷器是一種比傳統方法更環保的製冷技術。微型製冷器的能效可達 86%，由尺寸介於 0.5 至 2 毫米的微型電熱材料結構組成。製冷材料不含鉛，並可在指定電壓下實現超過 4 焦耳／克的製冷量。

**太陽能供電的汽車空調系統 – 特別獎及銀獎 (2011)**

理大研究人員成功開發了一種適用於多類汽車的創新太陽能供電系統。新系統配合其他節能技術如空調變速驅動器和雙電源模式，即使汽車關上引擎時也可供應足夠電力讓電子儀器及空調運作多個小時。按照估計，安裝了這種可再生能源系統的汽車每日行駛 6 小時，每年可減少排放約 4 噸二氧化碳。

**Reputable Educational Programme on Sustainability**

PolyU has a long-standing commitment to support environmental protection, economic prosperity and social equality through a wide range of academic initiatives. By integrating sustainability concepts into the university education and programmes, we aim to provide a holistic approach of education to our students, including environmental and civic responsibility and a sense of social justice.

**Community Service Learning Programme Won the MacJannet Prize for Global Citizenship**

Launched in 2004, The PolyU Community Service Learning Programme aims to encourage students to participate actively in community services. It has drawn participation from more than 20 academic departments in PolyU and has benefited over 490,000 needy through a variety of community support projects. For example, language studies students are required to help enhancing the language skills of underprivileged children and new immigrants; engineering students have strengthened the IT skills of ethnic minority groups; and students in occupational therapy have offered advice to the needy in home and community settings.

PolyU has formally introduced a credit-bearing “service-learning” requirement in the curriculum since September 2012. All undergraduate students on four-year degree programmes are required to take the compulsory service learning subject in order to acquire community serving knowledge and skills.

In 2011/12, 17 service learning subjects were approved and over 200 students gained academic credits by participating in community programmes in Hong Kong, Mainland China and Cambodia. In order to honor and recognize student’s dedicated commitment and outstanding achievements in serving the community, PolyU presented annual Outstanding Service Project Awards to exemplary projects. 9 out of 40 community service projects were selected for their outstanding performance.

**備受推崇的可持續發展教育課程**

理大一直矢志透過各樣的學術計劃促進環境保護、經濟繁榮和社會平等。我們將可持續發展概念融入大學的教育與課程，務求學生可接受涵蓋環境、公民責任和社會公義意識的多元化教育。

**社區服務學習計劃贏得全球公民 MacJannet 獎項**

理大於 2004 首辦社區服務學習計劃，鼓勵學生積極參與社區服務。本計劃獲得本校 20 多個學系踴躍支持，經常舉辦各類社區支援措施，至今已有逾 490,000 位有需要人士受惠。例如，貧苦兒童和新移民得到語言學系學生協助提高語言能力；工程學系學生則幫助少數族裔增進資訊科技技能；修讀職業治療的學生則透過家訪和社區活動為有需要人士提供指導。

理大於 2012 年 9 月開始將「服務學習」列為課程的學分必修科。所有修讀四年制本科學位課程的學生必須選讀強制性的服務學習科目，好讓他們掌握專業知識與技能服務社會。

於 2011/12 年度，本校審批了 17 個服務學習項目，逾 200 名學生曾在香港、中國內地和遠至柬埔寨服務並取得學分。為嘉許及表揚學生努力服務社會創出卓越表現，我們特別舉辦「傑出服務學習項目獎」，表揚傑出的模範項目。40 個服務學習項目中的其中 9 個獲選為傑出項目。

## Recognition and Achievement 獎項與成就

In particular, “PolyU has a Heart – Community Service Learning Programme in Sham Shui Po” won the MacJannet Prize for Global Citizenship organized by the US-based Talloires Network in 2012. PolyU is the only university from Hong Kong out of 52 universities in 21 countries around the world to receive this honour.



Exemplary Community Service Learning Projects in 2011  
2011年傑出的社區服務學習項目

### Work-Integrated Education Received Commendation in The Quality Assurance Council's Audit Report

Since 2005, PolyU has been the only university in Hong Kong that implements the mandatory Work-Integrated Education (WIE) in the University's undergraduate curriculum. WIE is work-based learning experiences which take place in an organizational context relevant to a student's future profession. It requires students to participate in projects or work internships during their studies. The aim of WIE is to integrate PolyU's professional education with workplace applications that fulfill the needs of the society.

In 2011/12, over 800 PolyU students successfully acquired internship opportunities that took place in mainland China and overseas, such as Australia, Canada, Germany, UK and the USA. The success of WIE has been recognized by receiving commendation in The Quality Assurance Council's audit report for PolyU (released in June 2011).

其中，「理有『深』社區服務計劃」於2012年獲美國 Talloires 網絡頒發全球公民 MacJannet 獎項。理大是全球 21 個國家 52 間大學中唯一取得這項殊榮的香港專上學府。

### 質素保證局核證報告讚揚「校企協作計劃」

我們於 2005 率先推行「校企協作計劃」(WIE)，成為香港首間將校企協作教育列為學士學位課程必修科的大學。校企協作以實習工作為骨幹，安排學生在相關的行業機構工作，汲取經驗。學生就讀課程期間需參與項目或見習計劃，目標是將理大的專業教育與工作場所實習兩者融合，以回應社會的需要。

2011/12 年度，逾 800 位理大學生有機會到內地和澳洲、加拿大、德國、英國及美國等海外國家實習。「校企協作計劃」成績斐然，質素保證局也在核證報告（2011 年 6 月發表的報告）中加以讚揚。

## Recognition and Achievement 獎項與成就

### Students Granted Awards for Developing Green Designs

In collaboration with Fukutomi Company Limited, the Department of Mechanical Engineering organized a student competition named “Potential Applications of Green Plastics” to encourage students to develop green innovative plastic products. All PolyU undergraduate students were invited to develop products by using recycled, reused or biodegradable plastics. 13 teams of students joined the competition and 5 of their winning innovative projects were showcased on PolyU campus in April 2011.

### 學生構思環保設計獲獎

理大機械工程學系與卜高通美有限公司協辦「環保塑料產品應用」比賽，鼓勵學生研發環保創新的塑膠產品。我們請所有理大本科生利用回收、再用或生物可降解塑料以設計產品，結果有 13 隊學生參賽，5 宗得獎的創新項目於 2011 年 4 月在理大校園展覽。



Students Received Awards for Developing Green Plastics  
設計環保塑膠產品的學生接受嘉許獎狀

Invited by the Hong Kong Trade Development Council, PolyU students showcased a number of prototypes of green plastic products at Eco Expo Asia in October 2011.

應香港貿易發展局邀請，理大學生亦在 2011 年 10 月舉行的國際環保博覽中展出了利用環保塑膠制造的一些產品原型。



Green Designs of PolyU Students Showcased at Eco Expo Asia  
理大學生在國際環保博覽展出環保塑膠產品設計

## Achievement in Supporting Development of the Industries

Proud to offer a unique research development environment “where innovation meets application”, we at PolyU always keep in mind the practical needs of our community and our country. With such a deep-rooted application-oriented research culture, our academics, which work closely with local business partners and benefit from a strong international network, strive to create innovations that have positive impact and practical value to the economy and the society.

### Cultivating Local Shipping and Logistics Industry

Based on our research on Thomson Reuters' database of ISI Web of Science (a worldwide literature sharing platform for research areas of science, social sciences, arts and humanities) for transportation-related publications during 2009-2011, PolyU published 23 out of the total 283 articles, which ranked the highest among major shipping schools in the world.

In view of the importance of shipping and logistics to the economic growth of Hong Kong and international trading, our research team has devised a framework for illustrating the market conditions and identifying major elements that are vital for the development of the associated industry. In the end of 2011, a multi-disciplinary research centre called Shipping Research Centre was set up on campus to further foster the research work and industrial collaboration in this regard.

### Striving for Tourist Satisfaction

First developed by the School of Hotel and Tourism Management in 2009, the 2011 PolyU Tourist Satisfaction Index (TSI) was published in October 2011 to provide the local industry a good indicator to identify room for improvement and further enhance the satisfaction level of inbound tourists.

The index provides a measurement on tourists' experience in six sectors including transportation, attractions, immigration services, hotels, restaurants and retail shops. The PolyU TSI 2011 (i.e. 72.61) ran lower compared to the previous two years (i.e. 72.65 in 2009, 73.94 in 2010). However, these scores have

## 支持業界發展卓有成效

本校成功創造了「凝聚智慧、實踐創意」的獨特研發環境，對此我們引以為傲。我們時刻關注社會和國家的實際需要，研究以此為本。這套以實用作主導的研究文化深植於理大，我們的學者與本港的商界夥伴合作無間，此外並有強大的國際網絡作後盾，攜手努力創新，開發可為經濟及社會帶來實際裨益與價值的創新產品。

### 栽培本地貨運及物流業

我們利用湯姆森路透 ISI 科學數據庫(全球科學、社會科學、藝術及人類學研究的文獻分享平台)調查研究了眾多與運輸相關刊物，理大於 2009 至 2011 年所發表的與運輸相關研究論文數目為全球之冠，期內 283 篇論文中 23 篇出自理大。

貨運及物流業對香港經濟發展和國際貿易舉足輕重。有見及此，我們的研究人員特別構思了一個研究框架，可剖析市況，並界定對相關產業的發展具重要作用的因素。2011 年底，我們在校園設立跨界別的航運研究中心，進一步承輔相關的研究工作和加強業界合作。

### 提升本地旅客滿意度

本校的「理大旅客滿意指數」(TSI) 是酒店及旅遊業管理學院於 2009 年構思設立，2011 年 TSI 指數已於 2011 年 10 月公佈，為業界提供實用指標，尋找改進空間，希望進一步提升訪港旅客的滿意度。

TSI 指數旨在評量旅客在六大旅遊服務領域的體驗，包括交通、景點、入境服務、酒店、食肆及零售商店。2011 年理大 TSI 指數 (72.61) 雖略低於過去兩

indicated a clear trend of consistent service excellence and a high level of customer satisfaction of the Hong Kong tourism industry.

### Establishing Business Sustainability Index

To promote the sustainable development of small and medium-sized enterprises (SME) and encourage good practice of corporate social responsibility (CSR), the Faculty of Business, collaborating with the Hong Kong Productivity Council, has released the HK SME Sustainability Index in February 2012.

As an indicator to reflect the contribution of 40 top SME companies with regard to economic, social and environmental sustainability, the index and the list of companies will be updated annually. The index announced this year reached 58.3 out of 100, indicating an early stage of adopting this new business trend and implying room for potential improvement in terms of sustainability for the local business.



The launching Ceremony of the Index Held on the PolyU Campus  
指數發佈會在理大校園舉行

### Branding for Catering Industry

The Public Policy Research Institute has carried out a special branding study to explore value-added potentials of local catering industry for Hong Kong Federation of Restaurants and Related Trades Limited. The study aimed to assist Hong Kong catering companies in building up their capacity of service quality, sharing best practices, as well as managing and enhancing brand image.

### Technology Licensing

Through the Institute for Entrepreneurship, PolyU has encouraged knowledge transfer to the business and infused its newly developed technologies to the industry in form of licensing options. There were more than 60 agreements/memoranda signed between PolyU and industrial partners in 2011/2012.

年 (2009 年 72.65 ; 2010 年 73.94) , 但仍清晰顯示出香港旅遊業的服務維持一貫的卓越水平，顧客滿意度甚高。

### 設立企業可持續發展指數

為提倡中小企奉行可持續發展概念和推廣企業社會責任良好守則，工商管理學院與香港生產力促進局共同合作，於 2012 年 2 月聯合發佈「香港中小企業可持續發展指數」。

指數衡量 40 間頂級中小企在經濟、社會及環境三方面的可持續發展貢獻，指數企業名單亦會每年更新。指數總分為 100，今年公佈的指數為 58.3，顯示這種新的營商趨勢尚處於發展初期，本港企業的可持續發展表現仍有改進空間。

### 促進飲食業品牌策略

公共政策研究所近期進行了一項特別的品牌推廣研究，為香港餐飲業協會探討本港飲食業的增值潛力。研究旨在協助香港飲食企業提升技能，改善服務質素和分享最佳作業方法，同時完善管理及優化品牌形象。

### 特許使用新技術

理大透過企業發展院積極推廣向企業的知識轉移，透過特許使用權的方法將新開發技術提供給業界應用。於 2011/2012 年度，理大與各行業夥伴共簽訂超過 60 份相關的協議 / 備忘錄。