THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

基於多光譜成像技術的顏色測量系統

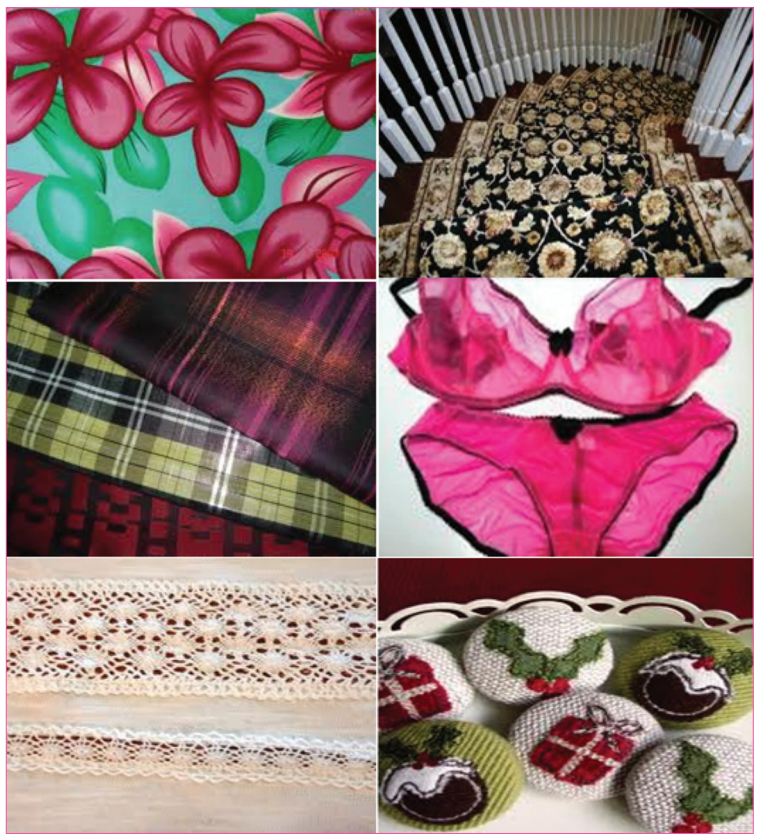
Imaging Colour Measurement System (ICM) based on Multispectral Imaging Technology

利用多光譜成像技術的ICM系統主要用於紡織與服裝行業中多色和不規則面料產品的顏色測量與品質管理

Colour measurement system using multispectral imaging technology for multi-colour and irregular fabric

ICM系統為紡織和服裝行業提供了一套完整的顏色解決方案。ICM系統能夠測量不同尺寸大小、多種顏色、不同材質，具有規則或是不規則形狀的色織布樣品、花邊、內衣、印花面料和相應的紡織面料配件。這些面料產品的顏色測量都是現有的分光光度計所無法實現的。

創新的ICM系統是精密硬體和專業化開發軟體系統的完美整合，實現高準確度，嚴格的一致性和穩定可靠的顏色測量與品質控制，以滿足日益多樣化的紡織品和服裝行業應用。



可以用ICM系統測試的布料類別
Examples of fabric that can be tested by the ICM System

專利編號及國家: 201010539818.2 (中國)

特色與優點

- 非接觸式顏色光譜測量，可實現單色或多色樣品、不規則表面形狀以及不受樣品大小限制的顏色測量和品質評估；
- 符合英國國家物理實驗室（NPL）測色標準，提供可靠和一致的分光測色

應　用

- 紡織和服裝行業的顏色測量和品質控制
- 塑膠、家用紡織品、食品、化妝品、汽車和電子行業的顏色評估與測量

獎　項

第41屆瑞士日內瓦國際發明展 - 金獎 (2013年4月)

ICM系統
Imaging Colour Measurement System

ICM系統介面
ICM System Screen Interface

The ICM system is the world first measurement instrument capable of measuring spectral reflectance over the visible spectrum from 400 – 700 nm with a very high accuracy. It measures colours of multi-colour samples ranging from printing fabrics, yarn-dyed fabrics, laces, yarns, threads, to coloured plastics, cosmetics, as well as automotive parts. The colour measurement capability of ICM system can be further extended to any multi-coloured, irregular shaped, extremely small 3-dimentional objects. It completely overcomes the limitation of measuring any multi-colour sample by a spectrophotometer that is the only type of accurate spectral colour measurement device available today.

Patent No: 201010539818.2(China)

Special Features and Advantages

- Non-contact spectral colour measurements towards multi-colour, irregular shaped, and extremely small sized 2- and 3-dimentional objects
- Very high accuracy up to 0.0024 in terms of root-mean-square spectral error, which is also traceable to the National Physical Laboratory of the U.K.

Application

Accurate colour measurement and colour quality control in textile and clothing as well as any colour-related industry for multi-colour, irregular shaped, and extremely small sized 2- and 3-dimentional objects such as printing fabrics, yarn-dyed fabrics, laces, yarns, threads, plastic, food, cosmetics, automotive and electronics parts.

Award

Gold Medal – 41st International Exhibition of Inventions of Geneva, Switzerland (April 2013)

Principal Investigator
Prof. John Xin
Institute of Textiles and Clothing
Contact Details
The Hong Kong Research Institute of Textiles and Apparel
Tel: (852) 2627 0180 Fax: (852) 2364 2727 Email: info@hkrita.com

Access More info via mobile
Note: Subject to data charges by mobile operators

A research project of HKRITA

HKRITA
THE HONG KONG 香港紡織及成衣研發中心 RESEARCH INSTITUTE OF TEXTILES AND APPAREL

5_ITC_20_0213