

功能性與裝飾性的濺射鍍紡織產品

Functional and Decorative Textile Products through Sputtering Technology



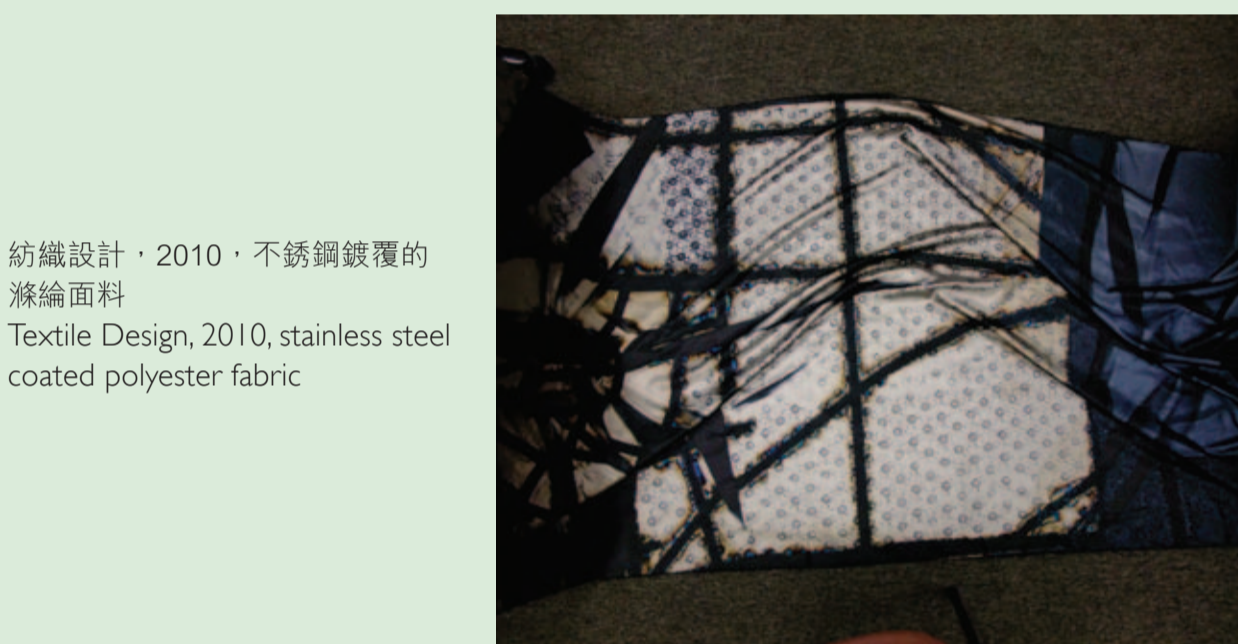
應用濺射鍍紡織布料設計

Functional and decorative metallic textiles for high-end fashion and accessory designs

這個研發項目透過濺射技術，以無水製作的方式，把銀、鈦和不銹鋼平均鍍覆在真絲及滌綸紡織品設計上，從而製作出裝飾與功能兼備、具金屬效果的面料。這技術可帶動創新的時裝設計，具廣泛的應用潛力。此項目有三部份：以創新方法製作裝飾與功能兼備、具金屬效果的面料；分析具金屬效果的真絲及滌綸紡織品特性；開發金屬面料的樣品。



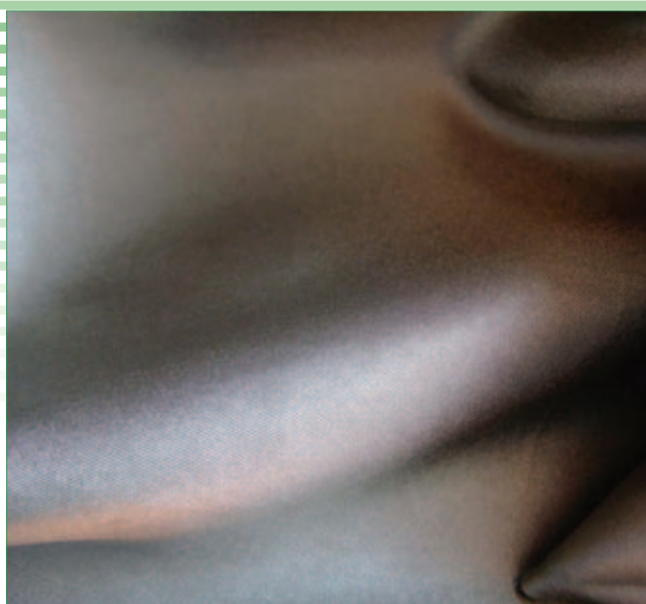
紡織設計 · 2009 · 不銹鋼，鈦，銀合金鍍覆的真絲面料
Textile Design, 2009, Stainless steel and alloy coated silk fabric



紡織設計 · 2010 · 不銹鋼鍍覆的滌綸面料
Textile Design, 2010, stainless steel coated polyester fabric



紡織設計 · 2010 · 不銹鋼，鈦，銀合金鍍覆的滌綸面料
Textile Design, 2010, Stainless steel and alloy-coated polyester fabric



紡織設計 · 2009 · 不銹鋼鍍覆的真絲面料 (1)
Textile Design, 2009, Stainless steel coated silk fabric (1)

With a non-aqueous process and sputtering technology, silver, titanium and stainless steel particles are evenly coated on silk and polyester fabrics. New textile products with novel decorative and functional properties and metallic appearance are created, which will inspire new fashion designs and have potentials of broad applications. The project has three components: 1) New approach to metallizing fabric for functional and decorative textiles; 2) Analysis of properties of metallized silk and polyester textiles; and 3) Prototypes of novel metallic textile design.

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金屬鍍覆技術不僅提升了紡織品的外觀，還表現出抗靜電、抑菌、以及防輻射等特性。這種織物手感柔軟，設計果效創新，具廣泛的應用潛能。作為一種無水加工方式，這種設計符合環保生產技術的要求。

這項目開發的技術應用範圍廣泛，可開拓高檔紡織服飾市場，例如晚裝、各種家居紡織品如窗簾、家具。

- 第40屆瑞士日內瓦國際發明展 — 銀獎 (2012年4月)
- 羅馬尼亞創新科技協會特別大獎(2012年4月)
- Lectra傑出學者獎，國際紡織服裝協會，蒙特利爾，2010
- 設計優秀獎，第五屆國際纖維藝術雙年展，中國工藝美術協會，北京，2008



紡織設計 · 2009 · 不銹鋼鍍覆的真絲面料 (2)
Textile Design, 2009, Stainless steel coated silk fabric (2)

Patent Application No.: 200910209008.8 (China)

The project creates a new approach to produce metallized textiles with anti-static, bacteria growth control, and radiation shielding properties. Particularly, the materials have soft hand feel and novel decorative effects, and thus have potential of broad applications. Besides, the technology is a non-aqueous process and therefore environmental friendly.

Broad applications are anticipated for the technology developed in the project. Due to the super functional properties, as mentioned above, and the novel decorative effects, metallized textiles can be used for luxury fashion designs, such as evening gowns, and various home textile products, such as curtains and furniture.

- Silver Medal - 40th International Exhibition of Inventions of Geneva, Switzerland (April 2012)
- Special Award from Romanian Association for Nonconventional Technologies, Bucharest, Romania (April 2012)
- Lectra Outstanding Faculty Award, International Textile and Apparel Association, Montreal (2010).
- Excellent Prize, 5th International Fiber Art Biennale, China Craft & Art Association, Beijing (2008).

特色與優點

應用

獎項

Special Features and Advantages

Application

Awards



A Research Project of HKRITA:

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The Hong Kong Research Institute
of Textiles and Apparel