

## 為紡織業提供等離子處理技術

香港生產力促進局現已開發了等離子處理系統，其主要特點是可提供軟性物料的連續等離子處理，適用於高性能衣料的生產，皮革類處理及薄膜物料的處理。等離子處理技術是一項創新的技術，能在各種布料，皮料，軟性薄膜附加上不同功能和性能。該技術是基於把處理氣體通過電能激發出不同能量的電子、離子和各種活性的微粒，這些氣體微粒與固體表面產生作用，使其性質發生改變，賦予材料的各種功能，如防黏、防皺、防水、防油等。應用等離子處理技術，還可把一些嶄新的納米材料與布料緊密結合形成特殊功能，如防紫外線、防靜電、防細菌等。另外，等離子過程是個不會污染環境，無需廢水處理系統的「乾法工序」。該技術進行微小的表面反應，可保持材料的原本優良特性。

### 優點

- 乾法潔淨工藝，無環境污染
- 表面處理僅影響材料表面，不損基體
- 多功能性，一機多用
- 運行費用低（低耗能，低化學品消耗）
- 操作安全，使用方便

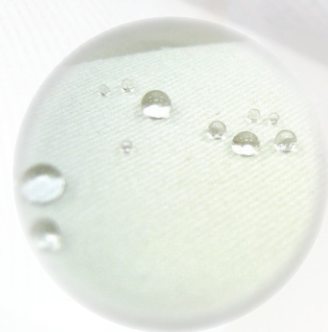
### 服務

- 開發新功能
- 生產機器的設計、供應及安裝
- 廠房設施規劃
- 技術指導、培訓

### 應用

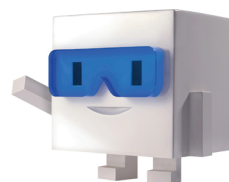
可改變材料表面得到不同功能：

- 吸濕性
- 粘接性
- 防皺性
- 具有單面性功能（一邊具吸濕性）
- 可染性
- 防縮防皺性
- 抗靜電性
- 防水防油性



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## Plasma Treatment Technology for Textiles and Apparel Industry

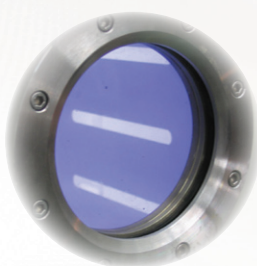
Hong Kong Productivity Council has developed a plasma treatment system based on the generation of an ionized gas plasma composed of ions and various gas particles to interact with fabrics. The fabric properties will then be modified and comprised of a wide range of specific characteristics such as the functions of reduced felting, crease-resistance, hydrophilic or hydrophobic, etc, suitable for high quality textile production. The plasma treatment process can also be served as a pretreatment process which transforms the fabrics to become easily bonded with innovative nano materials on its surface to achieve special functions, such as UV-protection, antistatic, anti bacteria or so on. The plasma process is completely pollution free, safe, cost effective and effective on wide materials applications. The treated surface provides the desirable bulk properties for natural or synthetic fabrics.

### Advantages

- Pollution free dry process
- Reactive surface maintains durable and desirable bulk properties
- Multifunctional applications with a single machine
- Low operation cost
- Safety and easy to operation

### Services

- New function development
- Production system design, fabrication and installation
- Facilities layout design
- In-house training



### Applications

The plasma treatment can modify the fabric surface to incorporate any one of the following functions:

- Wet ability
- Adherence
- Crease-resistance
- Single side function (Wettability for one side)
- Dyeability
- Reduced felting
- Antistatic
- Oil and water resistance



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