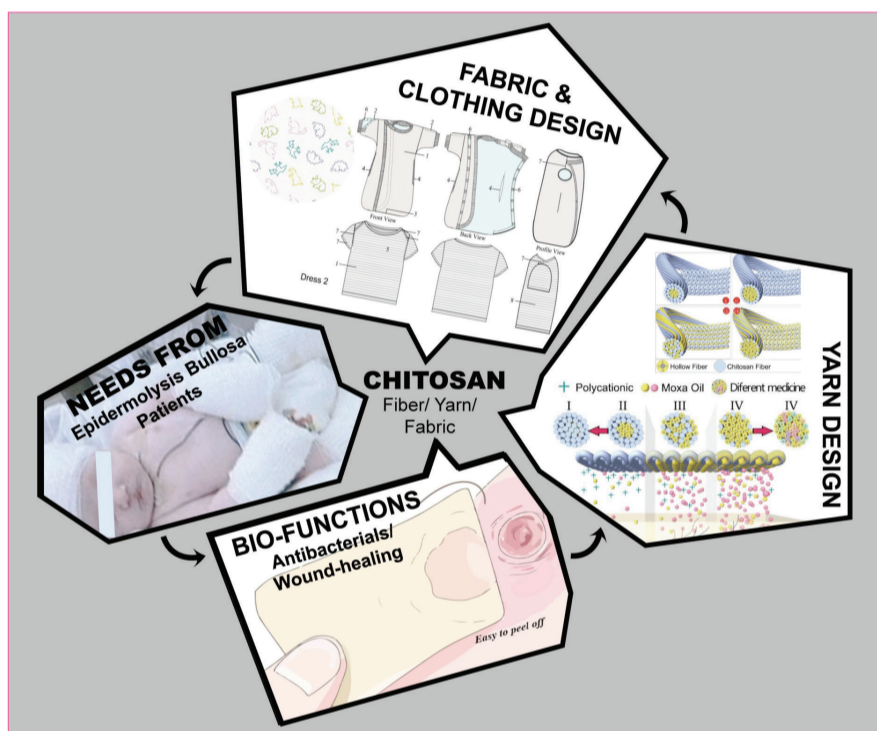


# 新型殼聚醣紗線紡紗技術系統 Innovative Spinning System for Chitosan Yarn

為殼聚醣纖維的紡織技術難題提供有效的解決方案  
Solving the technical problems of chitosan fibre spinning

殼聚醣纖維是由天然物料通過濕紡而成的天然纖維，具有抗菌及促進傷口癒合的功效。但由於殼聚醣容易產生靜電且機械性欠佳，在紡織過程中，殼聚醣纖維經常會纏住滾筒，造成嚴重的物料浪費。本技術基於摩擦起電的原理，能有效解決殼聚醣纖維的紡紗技術問題。透過本技術以梭織或針織方法製成的殼聚醣纖維織物具有良好的彈性、耐水洗性和舒適性，能為殼聚醣纖維開拓更廣闊的應用空間，尤其是在醫學領域。



殼聚醣纖維於醫學領域的應用  
Application of chitosan yarn on medical care

Chitosan fibre, known for its antibacterial and wound healing properties, is derived from natural materials and is processed using wet spinning technology. However, due to chitosan's tendency to discharge static electricity and its poor mechanical property, the problems of roller winding and high wastage are often encountered during the spinning process. Based on the triboelectric theory, the new system can efficiently solve the existing problems of chitosan fibre spinning. The elasticity, durability even after repeated laundering and comfort of woven/knitted chitosan fabric achieved by the new spinning system expands the application of chitosan fibre, especially in the healthcare area.

## 特色與優點

- 加強殼聚醣的物理性能，有效解決殼聚醣纖維纏繞滾筒及費物料等技術問題
- 降低生產成本
- 提升殼聚醣纖維的生物功能，如抗菌、促傷口癒合及保護皮膚，讓傷者或病人得到最佳的護理
- 增加殼聚醣產品開發的可能性

## 應用

- 衛生及保健產品，如治理燒傷和褥瘡的用品
- 紡織品及服裝
- 其他對舒適性和方便性有較高要求的醫用織物

## 獎項

- 第44屆瑞士日內瓦國際發明展 - 金獎 (2016年4月)

## Special Features and Advantages

- Strengthens the mechanical property of chitosan, and solves the problems of roller winding and high wastage
- Lowers production cost
- Maximizes the bio-functions of chitosan fibre, e.g. wound-healing, antibacterial and skin protection, thereby enhancing patient care
- Increases potential for chitosan-based products

## Applications

- Hygiene and health care products, e.g. products for burns or pressure ulcers
- Textiles and apparels
- Other medical textiles that require a high standard of comfort and convenience

## Award

- Gold Medal – 44th International Exhibition of Inventions of Geneva, Switzerland (April 2016)

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