

Nanotextiles to Marine Collagen: Advancing Skin Care Through Textile Technology

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Abstract : Skincare textiles, an emerging field at the crossroads of textile technology and wellness, offer groundbreaking innovations that aim to enhance health and well-being through everyday wear. This research paper explores the diverse spectrum of skin-friendly textiles, with a focus on key categories such as cosmetotextiles, skincare finishes, marine collagen fabrics, and nanotextiles. These developments reflect a shift towards a more holistic approach to clothing, where garments not only serve as fashion or protection but also contribute actively to personal care and wellness. Cosmetotextiles represent a transformative fusion of beauty and textile industries, where fabrics are impregnated with active cosmetic ingredients that provide skincare benefits as they are worn. By incorporating substances such as vitamins, moisturizers, essential oils, and antioxidants, these textiles continuously release beneficial ingredients to the skin throughout the day. The result is improved skin hydration, enhanced smoothness, and targeted therapeutic effects that redefine how clothing can interact with the body. Marine collagen fabrics introduce a novel approach to skincare, harnessing collagen derived from marine life to improve skin elasticity, hydration, and overall texture. With their natural bioactive compounds, these textiles can help stimulate skin repair and rejuvenation, positioning them as a promising tool in both beauty and medical applications. Marine collagen offers the dual benefit of contributing to sustainable textiles while delivering scientifically-backed skincare benefits. Nanotextiles, on the other hand, leverage the advancements in nanotechnology by integrating nanoparticles into fabric structures. These textiles exhibit multifunctional properties, such as antimicrobial action, UV protection, and wound-healing capabilities, making them highly suitable for medical textiles. Nanotextiles provide an avenue for creating clothing that not only protects the skin from environmental aggressors but also aids in recovery, regeneration, and long-term health maintenance. This paper provides an in-depth overview of healing textiles, examining their current advancements, practical applications, and the challenges faced in their development. Furthermore, it explores the future prospects of this innovative field, particularly its potential in bridging the gap between cutting-edge technology and traditional textile practices. As consumer demand for multifunctional and health-promoting textiles grows, healing textiles present a promising solution for improving quality of life through fabric innovation.

Keywords : skincare textiles, nanotechnology, cosmetotextiles, nanotextiles, marine collagen textiles and health

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