

Project title

“To Develop Light-Sensitive Photo-Chromic Smart Woollens by Sol-Gel Surface Coating Technology and Printing Method”

Point 1. Novelty in the project:

This technique is widely used in areas, such as ophthalmic lenses, printing materials, optical switches, optical shutters, plastic products like- Tea or Coffee Mugs, Tooth brush, toys. In textile sector however, it is not very popular since available photochromic dyes are acid dyes which are not compatible to natural fiber. No photochromic print technique is available for woollen product.

Point 2. Cross-sectional view of Development**Point 3. Publications-**

Sr. No.	Name of the Technical article	Type of technical article	Journal / Magazine name
1.	Comprehensive view on characteristics & applications of Smart chromic textiles	Technical review (Peer reviewed)	Colourage
2.	Light-sensitive smart colour changing textiles	Technical review	Asian Textile Journal
3.	Smart chromic colourants draw wide attention for the growth of future Intelligent textile materials	Technical review	Journal of advance research in manufacturing, material science & metallurgical engineering-

Point 4 : Patent

Title of patent: Light-Sensitive Photo-Chromic Woollens by Sol-Gel Surface Coating Technology and Printing Technology

Application no: 201821027138

Point 5. Interested industries for commercialization -

M/s Khanna Sports, Mumbai.

M/s Renfro India Limited, Pune.

M/s Jaya Shri Textiles, Kolkota.

M/s Banswara Syntex Limited, Rajasthan.

M/s NCP Textiles, Hydrabad.

Point 6. Commercialization status

All above stated industries have liked the concept & shown interest to use the technology.

WRA has taken trials and handed over printed 25 ladies garments to M/s Khanna sports. Market feasibility study of these samples is underway. Khanna sports are in sportswear, playground equipments, sports material & sports items. Its turnover is more than 1 crore.

WRA has also provided printed 20 socks to M/s Renfro ltd for market feasibility. Renfro India is a joint venture with Renfro Corporation, the largest socks company in the world. Renfro India dominates the domestic market, being the largest manufacturer of socks in India.

WRA is also in talk with M/s NCP Textiles, M/s Jaya Shri Textiles & Banswaa Syntex Limited in this regard.