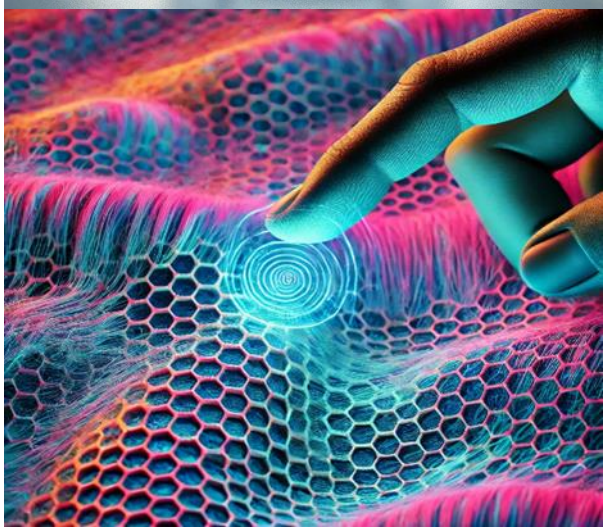
TEXTIL TOUCH SENSOR



Description

Research staff of the Integral Management Research Group in the Textile Industry of the Politic University of Valencia and the Interdepartmental Nursing Group (GEQUO) of the Foundation for the Promotion of Health and Biomedical Research of the Valencian Community (FISABIO), have developed a textile structure that acts as a touch sensor composed of a textile substrate and a grouping of nanofibers characterized by being polymeric material able to be processed in the form of nanofibers.

The grouping of fibers is characterized by being different in color to that of the substrate fabric and is detached by the mechanical action of friction or rubbing. This rubbing action will cause the non-woven layer to peel off and consequently, a change in colour of the whole when the fabric is uncovered, thus acting as a touch indicator.

This technology may be revealing for all those sanitary textiles or not requiring identification when being touched; Isolated patients (reverse insulation), contaminated personnel, contaminated surfaces, sterility needs, the need to account for unwanted contacts or manipulations of a textile, etc.

Technical advantages

- Flexible material and easily adaptable into the product shape.
- The cost of this new material should not significantly increase the total product cost.
- This material is easily integrable in PPE or other type of sanitary products.
- Durability of nanofiber layer can be modulated to adapt it to a different number of tactile interactions.
- Ease of use and interpretations of results.

State of development and Industrial Property rights

An industrial prototype has been successfully tested under laboratory conditions.

Utility Model has been filed at the Spanish Patent and Trademark Office with registration number U202430672 and priority date 27th January, 2023.

Co-owner

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