

Title (en)

ENVIRONMENTALLY RESPONSIVE BI-COMPONENT META FIBER TEXTILES AND METHODS OF MANUFACTURE

Title (de)

UMWELTVERTRÄGLICHE ZWEIKOMPONENTEN-METAFASERTEXTILIEN UND HERSTELLUNGSVERFAHREN

Title (fr)

TEXTILES EN MÉTA-FIBRES À DEUX COMPOSANTS SENSIBLES À L'ENVIRONNEMENT ET PROCÉDÉS DE FABRICATION

Publication

EP 3867430 A1 20210825 (EN)

Application

EP 19874357 A 20190430

Priority

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- US 2019029781 W 20190430

Abstract (en)

[origin: WO2020081121A1] A bimorph meta fiber is formed through spinning of two antagonistic polymer melts, one of which contains pre-compounded optical nanostructures, into an eccentric sheath-core configuration or a side-by-side key-lock configuration. The bimorph meta fiber is capable of an adaptive regulation of the infrared radiation responsive to humidity level deviation from a comfort zone or perspiration level of the wearer of the garment fabricated from the meta fibers. The bimorph meta fibers are humidity/heat trained to attain dynamical environmentally responsive behavior to maintain the humidity/thermal comfort zone at various the humidity level fluctuations.

CPC (source: EP US)

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