

Title (en)
ELECTROSPINNING SYSTEM AND PROCESS FOR LARGE-SCALE MANUFACTURING OF ALIGNED 3D FIBER MATRICES

Title (de)
ELEKTROSPINNSYSTEM UND VERFAHREN ZUR MASSENFERTIGUNG VON AUSGERICHTETEN 3D-FASERMATRIZEN

Title (fr)
SYSTÈME D'ÉLECTROFILATURE ET PROCÉDÉ DE FABRICATION À GRANDE ÉCHELLE DE MATRICES DE FIBRES EN 3D ALIGNÉES

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Application
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Abstract (en)
[origin: EP3670714A1] This invention relates to the system and process of continuous electrospinning for the production of three-dimensional matrices of aligned polymeric fibres. The system of the present invention comprises an electrospinning capillary tube (3) with positive polarity, a set of multi-electrodes with negative polarity inserted in a peripheral support (15), having each electrode (7) controlled movement allowing its exposure or retraction-occultation to the electrospinning tube (3), a central collecting table (17) of electrospun fibres, which is covered with holes (6, 16) connected to a chamber and to a vacuum pump (13). The formation of aligned three-dimensional matrices (30) occurs by deposition of layers, when exposing the electrodes (7) to the capillary tube (3), with the controlled distancing of the central collecting table (17), with respect to the electrospinning tube (3). The present invention has application in the medical field, in tissue engineering, in particular in regenerative medicine.

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