

Title (en)

PREPARATION METHOD FOR LONG CONTINUOUS ELECTROSPUN POLYACRYLONITRILE NANOFIBER YARN, AND APPLICATION THEREOF

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES KONTINUIERLICHEN FILAMENTGARNS AUS ELEKTROGESPONNENEN PPOLYACRYLONITRILNANOFASERN UND VERWENDUNG DAVON

Title (fr)

PROCÉDÉ DE PRÉPARATION DE FIL DE NANOFIBRES DE POLYACRYLONITRILE ÉLECTROFILÉES LONGUES CONTINUES ET APPLICATION ASSOCIÉE

Publication

EP 3760774 A1 20210106 (EN)

Application

EP 19909629 A 20190920

Priority

- CN 201910422360 A 20190521
- CN 2019106959 W 20190920

Abstract (en)

A method a for preparing a continuous filament yarn of electrospun polyacrylonitrile nanofibers, comprising the following steps: a. dissolving a polyacrylonitrile raw material in a polar solvent under mechanical stirring to obtain a uniform spinning solution; b. making the polyacrylonitrile solution in the step a into a polyacrylonitrile nonwoven fabric in an electrospinning machine; c. cutting the nonwoven fabric in the step b into slender strips with a width of 0.5 to 6 cm; d. drafting the slender strips in the step c in a water bath at 80-95°C with a draft ratio of 2 to 5 times, then drafting in air at 110 to 150°C with a draft ratio of 3 to 10 times to obtain a fiber bundle with highly oriented internal fibers; e. twisting the fiber bundle in the step d to obtain a continuous filament yarn of electrospun polyacrylonitrile nanofibers with a length of not less than 2000 meters.

IPC 8 full level

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CPC (source: CN EP)

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