

Title (en)
CONDUCTIVE FIBER SPINNING

Title (de)
SPINNEN VON LEITFÄHIGEN FASERN

Title (fr)
FILAGE DE FIBRES CONDUCTRICES

Publication
EP 3851563 A1 20210721 (EN)

Application
EP 20152431 A 20200117

Priority
EP 20152431 A 20200117

Abstract (en)
The present disclosure relates to a method for producing a conductive cellulosic fibre. The method comprises providing an ionic liquid comprising an anion and dissolving cellulose in the ionic liquid, thereby providing a solution of cellulose and ionic liquid. From this solution, a cellulosic fibre comprising the ionic liquid is formed. The method further comprises applying PEDOT:PSS to the surface of the cellulosic fibre comprising said ionic liquid and allowing substitution of the anion for PSS, thereby forming a coating on the cellulosic fibre, which coating comprises PEDOT. The present disclosure further relates to a conductive fibre.

IPC 8 full level
D01F 2/00 (2006.01); **D06M 15/356** (2006.01); **D06M 23/10** (2006.01)

CPC (source: EP)
D01F 2/00 (2013.01)

Citation (applicant)
• WO 2012041714 A1 20120405 - SIEMENS AG [DE], et al
• WO 2012120006 A1 20120913 - CNR CONSIGLIO NAZ DELLE RICERCHE [IT], et al

Citation (search report)
• [A] WO 2009101985 A1 20090820 - UNIV TOKYO [JP], et al
• [IA] US 2016258110 A1 20160908 - ALAMER FAHAD ABDULLAH ALHASHMI [SA]
• [A] ELSON MONTIBON ET AL: "Characterization of poly(3,4-ethylenedioxythiophene)/poly(styrene sulfonate) (PEDOT:PSS) adsorption on cellulosic materials", CELLULOSE, KLUWER ACADEMIC PUBLISHERS (DORDRECHT), NL, vol. 16, no. 5, 21 May 2009 (2009-05-21), pages 807 - 815, XP019728353, ISSN: 1572-882X, DOI: 10.1007/S10570-009-9303-3
• [A] DAWEI ZHAO ET AL: "Highly Flexible and Conductive Cellulose-Mediated PEDOT:PSS/MWCNT Composite Films for Supercapacitor Electrodes", ACS APPLIED MATERIALS & INTERFACES, vol. 9, no. 15, 5 April 2017 (2017-04-05), US, pages 13213 - 13222, XP055705701, ISSN: 1944-8244, DOI: 10.1021/acsami.7b01852

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CN113756096A; CN115305589A; CN115522279A; SE2250677A1; KR20240078190A

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3851563 A1 20210721; EP 3851563 B1 20240612; EP 3851563 C0 20240612

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