

Title (en)

METHOD OF PREPARING CELLULOSE FIBRES COATED WITH REDOX-ACTIVE POLYMER

Title (de)

VERFAHREN ZUR HERSTELLUNG VON MIT REDOXAKTIVEM POLYMER BESCHICHTETEN CELLULOSEFASERN

Title (fr)

PROCÉDÉ DE PRÉPARATION DE FIBRES DE CELLULOSE REVÊTUES DE POLYMÈRE AYANT UNE ACTIVITÉ OXYDORÉDUCTRICE

Publication

**EP 3757286 A1 20201230 (EN)**

Application

**EP 19182135 A 20190625**

Priority

EP 19182135 A 20190625

Abstract (en)

There is provided a method comprising the steps of: a) pretreating cellulose fibres so as to obtain pretreated cellulose fibres; and b) polymerizing monomers on the pretreated cellulose fibres so as to obtain cellulose fibres coated with a redox-active polymer. There is also provided a porous structure, such as a sheet, of pretreated cellulose fibres coated with a redox-active polymer, which porous structure is preferably produced according to the method.

IPC 8 full level

**D21C 9/005** (2006.01); **D21H 17/18** (2006.01); **D21H 17/49** (2006.01); **D21H 21/14** (2006.01); **D21H 27/00** (2006.01); **H01B 1/12** (2006.01); **H01B 1/20** (2006.01)

CPC (source: EP)

**D21C 9/005** (2013.01); **D21H 17/18** (2013.01); **D21H 17/49** (2013.01); **D21H 21/14** (2013.01); **D21H 27/00** (2013.01); **H01B 1/127** (2013.01); **H01B 1/128** (2013.01); **H01B 1/20** (2013.01)

Citation (applicant)

- NYSTROM, G. ET AL.: "A Nanocellulose Polypyrrole Composite Based on Microfibrillated Cellulose from Wood", JOURNAL OF PHYSICAL CHEMISTRY B, vol. 114, no. 12, 2010, pages 4178 - 4182, XP055027799, DOI: doi:10.1021/jp911272m
- BRUNAUERSTEPHENPAUL HUGH EMMETTEDWARD TELLER: "Adsorption of gases in multimolecular layers", JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 60, no. 2, 1938, pages 309 - 319

Citation (search report)

- [X] US 5211810 A 19930518 - BARTHOLOMEW GENE W [US], et al
- [X] JP 2012219380 A 20121112 - KAO CORP
- [X] XUEREN QIAN ET AL: "INFLUENCE OF PULP FIBER SUBSTRATE ON CONDUCTIVITY OF POLYANILINE-COATED CONDUCTIVE PAPER PREPARED BY IN-SITU POLYMERIZATION", 31 May 2010 (2010-05-31), XP055640672, Retrieved from the Internet <URL:https://www.researchgate.net/profile/Jing\_Shen15/publication/41847161\_Influence\_of\_pulp\_fiber\_substrate\_on\_conductivity\_of\_polyaniline-coated\_conductive\_paper\_prepared\_by\_in-situ\_polymerization/links/54464fab0cf22b3c14de1a33/Influence-of-pulp-fiber-substrate-on-conductivity-of-polyaniline-coated-con> [retrieved on 20191108]
- [X] KHALIL JRADI ET AL: "Characterization of conductive composite films based on TEMPO-oxidized cellulose nanofibers and polypyrrole", JOURNAL OF MATERIALS SCIENCE, KLUWER ACADEMIC PUBLISHERS, BO, vol. 47, no. 8, 5 January 2012 (2012-01-05), pages 3752 - 3762, XP035007887, ISSN: 1573-4803, DOI: 10.1007/S10853-011-6226-9
- [XD] GUSTAV NYSTROM ET AL: "A Nanocellulose Polypyrrole Composite Based on Microfibrillated Cellulose from Wood", THE JOURNAL OF PHYSICAL CHEMISTRY B, vol. 114, no. 12, 5 March 2010 (2010-03-05), pages 4178 - 4182, XP055027799, ISSN: 1520-6106, DOI: 10.1021/jp911272m

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 3757286 A1 20201230**; WO 2020260323 A1 20201230

DOCDB simple family (application)

**EP 19182135 A 20190625**; EP 2020067564 W 20200623