Title (en)

METHOD FOR GRAFTING INTO A LAYER LOCATED DEEP INSIDE AN ORGANIC MATERIAL BY MEANS OF AN ION BEAM

Title (de)

VERFAHREN ZUR PFROPFUNG IN EINE SCHICHT TIEF IM INNEREN EINES ORGANISCHEN MATERIALS ANHAND EINES IONENSTRAHLS

Title (fr)

PROCEDE DE GREFFAGE EN COUCHE PROFONDE DANS UN MATERIAU ORGANIQUE PAR UN FAISCEAU D'IONS

Publication

EP 2593500 A1 20130522 (FR)

Application

EP 11741630 A 20110701

Priority

- FR 1002989 A 20100716
- FR 2011051551 W 20110701

Abstract (en)

[origin: WO2012007671A1] The invention relates to a method for grafting monomers (M) into a layer located deep inside an organic material by means of an ion beam (X), wherein: the dose of ions per unit of area is selected from a range of 1012 ions/cm2 to 1018 ions/cm2 so as to create a store of free radicals (1) in a large layer of between 0 and 3000 nm; and free radicals (1) of hydrophilic and/or hydrophobic and/or antibacterial monomers (M) are grafted into said store. Organic materials having water-repellant, hydrophilic, and/or antibacterial properties that are effective over a long period of time can thus be obtained.

IPC 8 full level

C08J 7/12 (2006.01); **C23C 14/46** (2006.01); **C23C 14/48** (2006.01)

CPC (source: EP US)

B05D 3/068 (2013.01 - US); **B32B 15/04** (2013.01 - US); **C08J 7/123** (2013.01 - EP US); **C23C 14/48** (2013.01 - EP US); Y10T 428/273 (2015.01 - EP US)

Citation (search report)

See references of WO 2012007671A1

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

DOCDB simple family (publication)

WO 2012007671 A1 20120119; CN 103003340 A 20130327; CN 103003340 B 20140528; EP 2593500 A1 20130522; FR 2962736 A1 20120120; FR 2962736 B1 20120803; JP 2013537569 A 20131003; JP 5816687 B2 20151118; US 2013115449 A1 20130509

DOCDB simple family (application)

FR 2011051551 W 20110701; CN 201180035146 A 20110701; EP 11741630 A 20110701; FR 1002989 A 20100716; JP 2013519131 A 20110701; US 201113810373 A 20110701