

Title (en)

METHOD OF MANUFACTURING SILVER NANOPARTICLES, CELLULOSIC FIBERS AND NANOFIBERS CONTAINING SILVER NANOPARTICLES AND USES THEREOF IN BACTERICIDAL YARNS AND TISSUES

Title (de)

VERFAHREN ZUR HERSTELLUNG VON SILBERNANOPARTIKELN, ZELLULOSEFASERN UND NANOFASERN MIT NANOPARTIKELN AUS SILBER, UND DEREN VERWENDUNG IN BAKTERIZIDEM GARN UND GEWEBE

Title (fr)

PROCÉDÉ DE FABRICATION DE NANOPARTICULES D'ARGENT, DE FIBRES ET DE NANOFIBRES CELLULOSIQUES CONTENANT DES NANOPARTICULES D'ARGENT, FIBRES ET NANOFIBRES CONTENANT DES NANOPARTICULES D'ARGENT, UTILISATION DE NANOPARTICULES D'ARGENT DANS LA FABRICATION DE FIBRES ET DE NANOFIBRES CELLULOSIQUES, ET PANSEMENT CONTENANT DE NANOPARTICULES D'ARGENT.

Publication

**EP 2126146 A1 20091202 (EN)**

Application

**EP 07709262 A 20070213**

Priority

PL 2007000007 W 20070213

Abstract (en)

[origin: WO2008100163A1] The subjects of the invention are a method of manufacturing silver nanoparticles of 1 to 350 nm in size, a method of manufacturing cellulosic fibers and nanofibers containing silver nanoparticles, fibers and nanofibers containing silver nanoparticles, the use of silver nanoparticles to the manufacture of cellulosic fibers and nanofibers and a wound dressing that contains silver nanoparticles. Silver nanoparticles are characterized by a considerable and selective biological activity due to which they are bactericidal, bacteriostatic and fungicidal. Advantages of nanoparticle-sized silver are its very large active surface that enables its use at very low concentrations, no risk of increasing susceptibility to mycosis and non-causing potentially hazardous mutations of bacteria. According to the invention presented, silver nanoparticles can be employed directly in the form of spinning solution of cellulose for the manufacture of cellulosic fibers and nanofibers of bactericidal properties. The silver nanoparticles are obtained by reducing water-soluble silver salts in the presence of an aqueous solution of N-methylmorpholine N-oxide.

IPC 8 full level

**C22B 11/00** (2006.01); **B22F 1/00** (2006.01); **B22F 9/24** (2006.01); **C22B 5/00** (2006.01); **D01F 1/10** (2006.01); **D01F 2/00** (2006.01); **D02G 3/44** (2006.01); **D06M 11/65** (2006.01)

CPC (source: EP US)

**B22F 9/24** (2013.01 - EP); **C22B 5/00** (2013.01 - EP); **C22B 11/00** (2013.01 - EP US); **D01F 1/103** (2013.01 - EP); **D01F 2/00** (2013.01 - EP); **D06M 11/65** (2013.01 - EP); **B22F 2998/00** (2013.01 - EP)

C-Set (source: EP US)

**B22F 2998/00 + B22F 1/054 + B22F 1/056 + B22F 1/0545**

Citation (search report)

See references of WO 2008100163A1

Cited by

RU2619704C1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 2008100163 A1 20080821**; EP 2126146 A1 20091202; EP 2126146 B1 20150715

DOCDB simple family (application)

**PL 2007000007 W 20070213**; EP 07709262 A 20070213