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(54) Title: NON-COVALENTLY BONDING ANTI-MICROBIAL NANOPARTICLES FOR WATER SOLUBLE WOOD TREATMENT

(57) Abstract: Embodiments described herein include capped nanoparticles having a nanoparticle core and at least one capping agent including a biochemical constituent of wood or a woody plant or a derivative thereof functionally associated to the nano-particle core. Some embodiments provide for wood products and wood treatment compositions including such capped nanoparticles, and methods for preparing and using such capped nanoparticles to produce treated wood or treated wood products.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 11/41372

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B05D 3/02 (2011.01)

USPC - 427/393

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - B05D 3/02 (2011.01)

USPC - 427/393

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(8) - B05D 3/02; B05D; B27K; C08L (2011.01)

USPC - 424/\$; 427/393, \$; 428/\$

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWest (PGPB,USPT,USOC,EPAB,JPAB); USPTO; Espacenet; Google Patents; Google Scholar; Google -- ANTIBACTER\$
ANTIFUNG\$ CELLULOS\$ CORE HEMICELLULOS\$ IMPREGNAT\$ LIGNIN METAL NANOPARTIC\$ OXIDE PECTIN PRESERV\$
SHELL SILVER WOOD ZINC (MgO OR ZnO OR FeO OR Fe3O4 OR ZnS OR CuO OR SnO2 OR TiO2 OR AgNO3)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2010/0233245 A1 (Narayana) 16 September 2010 (16.09.2010) para [0001]; [0008]; [0019]; [0021]; [0023]; [0024]; [0056]; [0063]; [0064]; [0065]; [0067]; [0068]; [0086]	1-10,52-61 ----- 11-51
Y	WO 2010/057114 A2 (Miller et al.) 20 May 2010 (20.05.2010) Fig 1; Fig 2a; para [0027]; [0031]; [0040]; [0042]; [0049]; [0066]; [0073]	11-21
Y	EP 2168737 A1 (Gonzalo Perez) 31 March 2010 (31.03.2010) para [0005]; [0007]; [0008]; [0010]; [0012]; [0013]; [0019]	22-51
A	US 2010/0272819 A1 (Engelhardt et al.) 28 October 2010 (28.10.2010) para [0011] to [0015]; [0017]; [0027]; [0032]; [0033]; [0038]	1-61
A	US 2009/0197105 A1 (Buchholz et al.) 06 August 2009 (06.08.2009) para [0001]; [0048]	1-61
A	US 2003/0134137 A1 (Laks et al.) 17 July 2003 (17.07.2003) abstract	1-61

☐ Further documents are listed in the continuation of Box C.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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