

Title (en)

FIELD EMISSION DEVICES MADE WITH LASER AND/OR PLASMA TREATED CARBON NANOTUBE MATS, FILMS OR INKS

Title (de)

MIT LASER UND/ODER PLASMABEHANDELLTE KOHLENSTOFFNANORÖHRENMATTEN;FOLIEN ODER TINTENHERGESTELLTE FELDEMISSIONSVORRICHTUNGEN

Title (fr)

DISPOSITIFS D'EMISSION DE CHAMP COMPRENNANT DES MATS, FILMS OU ENCRES DE NANOFIBRES DE CARBONE TRAITES AU LASER ET/OU AU PLASMA

Publication

EP 1663857 A2 20060607 (EN)

Application

EP 04777763 A 20040709

Priority

- US 2004021878 W 20040709
- US 48591803 P 20030709

Abstract (en)

[origin: WO2005012162A2] Field emission devices comprising carbon nanotube mats which have been treated with laser or plasma are provided. Mats are formed from carbon nanotubes, also known as carbon fibrils, which are vermicular carbon deposits having diameters of less than about one micron. The carbon nanotube mats are then subjected to laser or plasma treatment. The treated carbon nanotube mat results in improved field emission performance as either a field emission cathode or as part of a field emission device.

IPC 1-7

C01B 6/00

IPC 8 full level

H01J 9/02 (2006.01); **H01B 1/04** (2006.01); **H01J 1/304** (2006.01); **H01J 9/04** (2006.01)

IPC 8 main group level

C01B (2006.01)

CPC (source: EP KR)

B01J 19/12 (2013.01 - KR); **B82Y 10/00** (2013.01 - EP KR); **B82Y 30/00** (2013.01 - EP KR); **H01B 1/04** (2013.01 - EP KR); **H01J 1/304** (2013.01 - EP KR); **H01J 9/025** (2013.01 - EP KR); **H01J 2201/30469** (2013.01 - EP KR)

Designated contracting state (EPC)

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

DOCDB simple family (publication)

WO 2005012162 A2 20050210; **WO 2005012162 A3 20081016**; AU 2004261558 A1 20050210; AU 2004261558 B2 20100422; CA 2531628 A1 20050210; CN 101410927 A 20090415; CN 101410927 B 20110914; EP 1663857 A2 20060607; EP 1663857 A4 20110525; JP 2007531201 A 20071101; JP 2010177214 A 20100812; KR 20060064604 A 20060613; KR 20090082294 A 20090729; KR 20090082295 A 20090729; MX PA06000248 A 20060831

DOCDB simple family (application)

US 2004021878 W 20040709; AU 2004261558 A 20040709; CA 2531628 A 20040709; CN 200480025387 A 20040709; EP 04777763 A 20040709; JP 2006518900 A 20040709; JP 2010102215 A 20100427; KR 20067000515 A 20060109; KR 20097014364 A 20040709; KR 20097014365 A 20040709; MX PA06000248 A 20040709