

Title (en)  
FIELD EMISSION COLD CATHODE

Title (de)  
FELDEMISSIONSKALTKATHODE

Title (fr)  
CATHODE FROIDE A EMISSION DE CHAMP

Publication  
**EP 1523751 A1 20050420 (EN)**

Application  
**EP 02756381 A 20020718**

Priority  
US 0221283 W 20020718

Abstract (en)  
[origin: WO2004010450A1] A field emission cold cathode (11) for use in vacuum tubes. A carbon velvet material (25) is comprised of high aspect ratio carbon fibers embedded perpendicular to a base material. The tips and/or the shafts of the carbon velvet material (25) are coated with a low work function cesiated salt. The base material of the carbon velvet material (25) is bonded to a cathode surface (27). The cold cathode (11) emits electrons when an electric field is applied, even at operating temperatures less than 900 DEG C.

IPC 1-7  
**H01J 1/304**; H01J 9/02; H01J 23/04

IPC 8 full level  
**H01J 1/304** (2006.01); **H01J 9/02** (2006.01); **H01J 23/04** (2006.01)

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**H01J 1/304** (2013.01); **H01J 9/025** (2013.01); **H01J 2201/30446** (2013.01)

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See references of WO 2004010450A1

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