

Title (en)

COLD CATHODE FIELD EMISSION DEVICE HAVING INTEGRAL CONTROL OR CONTROLLED NON-FED DEVICES

Publication

**EP 0476108 A4 19920624 (EN)**

Application

**EP 91907301 A 19910326**

Priority

US 50259390 A 19900330

Abstract (en)

[origin: WO9115874A1] A variety of integrally combined field emission devices (104) and non-field emission control and/or controlled devices (101), such as field effect transistors (201) and bipolar transistors (101). Various embodiments of field emission devices (104) are accommodated, including those having substantially planar oriented electrodes, non-planar structures having cone shaped emitters (107), and inverted emitter structures.

IPC 1-7

**H01L 27/04**; **H01J 21/16**

IPC 8 full level

**H01J 1/304** (2006.01); **H01L 21/822** (2006.01); **H01L 21/8222** (2006.01); **H01L 27/06** (2006.01); **H01L 29/66** (2006.01)

CPC (source: EP)

**H01L 27/0623** (2013.01)

Citation (search report)

- [X] US 4663559 A 19870505 - CHRISTENSEN ALTON O [US]
- [XP] FR 2641108 A1 19900629 - THOMSON CSF [FR]
- [E] DE 4112078 A1 19911017 - FUTABA DENSHI KOGYO KK [JP]
- See references of WO 9115874A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

**WO 9115874 A1 19911017**; EP 0476108 A1 19920325; EP 0476108 A4 19920624; JP H04506435 A 19921105

DOCDB simple family (application)

**US 9102025 W 19910326**; EP 91907301 A 19910326; JP 50666391 A 19910326