

Title (en)  
Electron emission element and method of manufacturing the same

Title (de)  
Elektronen emittierendes Element und dessen Herstellungsverfahren

Title (fr)  
Élément émetteur d'électrons et son procédé de fabrication

Publication  
**EP 0278405 B1 19960821 (EN)**

Application  
**EP 88101626 A 19880204**

Priority

- JP 2487287 A 19870206
- JP 2487387 A 19870206
- JP 3807587 A 19870223
- JP 3807687 A 19870223
- JP 4781687 A 19870304
- JP 5034487 A 19870306
- JP 5211387 A 19870309
- JP 6789287 A 19870324
- JP 7046787 A 19870326
- JP 7360187 A 19870327

Abstract (en)  
[origin: EP0278405A2] A multi type electron emission element comprises a plurality of electrodes formed on a deposition surface of an insulating material and each having a conical portion of a single crystal, an insulating layer formed on the deposition surface and having openings respectively centered on the conical portions, and a deriving electrodes, part of which is formed near at least the conical portions, the deriving electrode being formed on the insulating layer.

IPC 1-7  
**H01J 1/30**; **H01J 3/02**

IPC 8 full level  
**H01J 1/304** (2006.01); **H01J 3/02** (2006.01); **H01J 9/02** (2006.01); **H01J 31/12** (2006.01)

CPC (source: EP)  
**H01J 1/3042** (2013.01); **H01J 3/022** (2013.01); **H01J 9/025** (2013.01); **H01J 31/127** (2013.01); **H01J 2201/30446** (2013.01)

Cited by  
EP0528391A1; FR2644287A1; CN1044945C; US5994834A; FR2669465A1; US5581146A; EP0713237A1; US5554859A; EP0696814A1; US5793153A; EP0688035A1; AU680757B2; CN1086508C; EP0528322A1; CN1042470C; US5090932A; EP0665573A1; CN1059050C; EP0483814A3; US5332627A; EP0623944A1; US5498925A; GB2247773A; US5270258A; GB2247773B; US5367181A; EP0443920A1; FR2658839A1; US5314569A; EP0362017A1; FR2637126A1; US4986787A; US8866068B2; US6445367B1; US6169528B1; WO8909479A1; WO9209095A1; WO9910911A1

Designated contracting state (EPC)  
DE FR GB IT NL

DOCDB simple family (publication)  
**EP 0278405 A2 19880817**; **EP 0278405 A3 19900516**; **EP 0278405 B1 19960821**; AU 1134388 A 19880811; AU 631327 B2 19921119; AU 8774991 A 19920109; DE 3855482 D1 19960926; DE 3855482 T2 19970320; DE 3856492 D1 20011025; DE 3856492 T2 20021031; EP 0713241 A2 19960522; EP 0713241 A3 19960605; EP 0713241 B1 20010919

DOCDB simple family (application)  
**EP 88101626 A 19880204**; AU 1134388 A 19880205; AU 8774991 A 19911111; DE 3855482 T 19880204; DE 3856492 T 19880204; EP 96100917 A 19880204