

Title (en)

FABRICATION OF GATED ELECTRON-EMITTING DEVICE UTILIZING DISTRIBUTED PARTICLES TO DEFINE GATE OPENINGS

Title (de)

HERSTELLUNG VON GITTERGESTEUERTER ELEKTRONEN EMITTIERENDE QUELLE MITTELS VERTEILTE TEILCHEN ZUR BESTIMMUNG DER GITTERÖFFNUNGEN

Title (fr)

FABRICATION D'UN DISPOSITIF EMETTEUR D'ELECTRONS POURVU D'UNE GRILLE UTILISANT LA DISTRIBUTION DE PARTICULES POUR DEFINIR DES OUVERTURES DE GRILLE

Publication

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Application

EP 97927842 A 19970605

Priority

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Abstract (en)

[origin: WO9747021A1] An electron-emitter having a lower non-insulating emitter region (42), an overlying insulating layer (44), and a gate layer (48A, 60A, 60B, 120A, or 180A/184) is fabricated by a process in which particles (46) are distributed over one of the following layers: the insulating layer, the gate layer, a primary layer (50A, 62A, or 72) provided over the gate layer, a further layer (74) provided over the primary layer, or a pattern-transfer layer (182). The particles are utilized in defining gate openings (54, 66, 80, 122, or 186/188) through the gate layer. The gate openings are then variously employed in forming dielectric openings (56, 58, 80, 114, 128, 144, or 154) through the insulating layer. Electron-emissive elements that can, for example, be shaped like cones (58A or 70A) or like filaments (106B, 116B, 130A, 146A, or 156B) are formed in the dielectric openings.

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