

Title (en)
Cathode structures.

Title (de)
Kathodenstrukturen.

Title (fr)
Structure cathodiques.

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EP 93303680 A 19930512

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Abstract (en)
An electrode structure for a field emission vacuum device comprises an array of emitter tips (1) of micron dimensions protruding from a substrate (6) and an overlying grid layer (5) with an aperture (3) therethrough. A thin coating of material is formed over each tip by evaporation or sputtering of the material. An insulating spacer layer (7) between the substrate and the grid layer also has an aperture (9) encircling each emitter tip, the aperture in the insulating layer being of larger diameter than that in the grid layer, so that the evaporated or sputtered material does not reach the wall of the aperture in the insulating layer to cause a grid/cathode short-circuit. The evaporated or sputtered thin film may be formed of, for example, Pd, Ir or Pt. <IMAGE>

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

CPC (source: EP)
H01J 9/025 (2013.01); **H01J 2201/30426** (2013.01)

Citation (search report)
• [X] EP 0434330 A2 19910626 - SEIKO EPSON CORP [JP]
• [X] DE 2536363 A1 19760226 - HITACHI LTD
• [Y] EXTENDED ABSTRACTS vol. 86-1, no. 1, May 1986, PENNINGTON, NEW JERSEY, USA pages 403 - 404 H.H. BUSTA ET AL. 'Micromachined tungsten field emitters'

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