

Title (en)
HIGHTLY EFFICIENT PHOTOCATHODE

Publication
EP 0228323 B1 19900404 (FR)

Application
EP 86402618 A 19861125

Priority
FR 8517719 A 19851129

Abstract (en)
[origin: US4749903A] In one example of construction, a high-performance photocathode has the following structure: a transparent layer formed of P+ type semiconductor material having a forbidden band of sufficient width to ensure that this layer is transparent to the photons of the light to be detected; an absorption layer constituted by ten first sublayers formed of P+ type semiconductor material with a forbidden band of sufficiently small width to have two-dimensional electronic properties in order to achieve efficient conversion of the photons into electron-hole pairs and by ten second sublayers interposed between the first and formed of the same material as the transparent layer, the second sublayers being sufficiently thin to permit passage of electrons by tunnel effect and the thickness of the first sublayers being sufficient to permit absorption of the photons of all wavelengths of the light to be detected; a transport layer formed of the same material as the first sublayers; a layer of Cs+O for reducing the energy-gap potential so as to permit emission of electrons into vacuum.

IPC 1-7
H01J 1/34; **H01J 29/38**

IPC 8 full level
H01J 1/34 (2006.01)

CPC (source: EP US)
H01J 1/34 (2013.01 - EP US); **H01J 2201/3423** (2013.01 - EP US)

Cited by
EP0810621A1; US5923045A

Designated contracting state (EPC)
DE GB NL

DOCDB simple family (publication)
EP 0228323 A1 19870708; **EP 0228323 B1 19900404**; DE 3670176 D1 19900510; FR 2591033 A1 19870605; FR 2591033 B1 19880108; JP S62133634 A 19870616; US 4749903 A 19880607

DOCDB simple family (application)
EP 86402618 A 19861125; DE 3670176 T 19861125; FR 8517719 A 19851129; JP 28411286 A 19861128; US 93448186 A 19861124