

Title (en)

IMPROVEMENTS IN PARTICLE DETECTOR SPATIAL RESOLUTION.

Publication

EP 0597943 A4 19940727 (EN)

Application

EP 92916511 A 19920730

Priority

- US 9206308 W 19920730
- US 73852991 A 19910731
- US 92150592 A 19920729

Abstract (en)

[origin: WO9303496A1] Method and apparatus (11) for producing separated columns (19) of scintillation layer material (18), for use in detection of X-rays and high energy charged particles (23), with improved spatial resolution. A pattern of ridges or projections (16) is formed on one surface of a substrate layer or in a thin polyamide layer (15), and the scintillation layer (18) is grown at controlled temperature and growth rate on the ridge-containing material (16). The scintillation material (18) preferentially forms cylinders or columns (19), separated by gaps (20) conforming to the pattern of ridges (16), and these columns (19) direct most of the light produced in the scintillation layer (18) along individual columns (19) for subsequent detection in a photodiode layer (13). The gaps (20) may be filled with a light-absorbing material to further enhance the spatial resolution of the particle detector.

IPC 1-7

H01L 21/306

IPC 8 full level

G01T 1/20 (2006.01); **H01L 31/0232** (2006.01)

CPC (source: EP US)

G01T 1/20183 (2020.05 - EP US); **H01L 31/02322** (2013.01 - EP)

Citation (search report)

- No further relevant documents disclosed
- See references of WO 9303496A1

Cited by

US10061036B2

Designated contracting state (EPC)

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

DOCDB simple family (publication)

WO 9303496 A1 19930218; CA 2114539 A1 19930218; EP 0597943 A1 19940525; EP 0597943 A4 19940727; JP H07500454 A 19950112

DOCDB simple family (application)

US 9206308 W 19920730; CA 2114539 A 19920730; EP 92916511 A 19920730; JP 50371693 A 19920730