

Title (en)

METHOD FOR FABRICATING THIN FILM SEMICONDUCTOR DEVICES

Title (de)

VERFAHREN ZUR HERSTELLUNG VON DÜNNSCHICHTHALBLEITERBAUELEMENTEN

Title (fr)

PROCEDES POUR FABRIQUER DES DISPOSITIFS SEMI-CONDUCTEURS A FILM MINCE

Publication

**EP 1153423 A1 20011114 (EN)**

Application

**EP 00903637 A 20000126**

Priority

- EP 00903637 A 20000126
- EP 0000586 W 20000126
- EP 99200235 A 19990127

Abstract (en)

[origin: EP1024523A1] The present invention is related to a method for fabricating thin film semiconductor devices on a reusable substrate. Examples of such devices are for instance solar cells, light emitting diodes and power devices. The invented method allows for simple and cheap processing techniques like for instance screen printing and electroless etching to be successfully applied in combination with thin film semiconductor devices of only a few  $\mu\text{m}$  thickness using very cheap supports such as plastic films. The whole process is executed on a high quality substrate which is compatible with all high temperature treatments such as e.g. diffusion and thermal oxidation. Semiconductor thin films are grown on a porous layer formed on the surface of the reusable substrate. After being attached to a cheap second substrate, i.e. the support, the completed thin film semiconductor devices are lifted off from this comparably expensive substrate at the end of the process by a wet etching of the porous layer.

<IMAGE>

IPC 1-7

**H01L 21/20**; **H01L 31/18**

IPC 8 full level

**H01L 21/20** (2006.01); **H01L 21/762** (2006.01); **H01L 31/0224** (2006.01); **H01L 31/0352** (2006.01); **H01L 31/18** (2006.01)

CPC (source: EP)

**H01L 21/76256** (2013.01); **H01L 31/022441** (2013.01); **H01L 31/03529** (2013.01); **H01L 31/1804** (2013.01); **H01L 31/1892** (2013.01); **Y02E 10/547** (2013.01); **Y02P 70/50** (2015.11)

Citation (search report)

See references of WO 0045426A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

**EP 1024523 A1 20000802**; AU 2544900 A 20000818; EP 1153423 A1 20011114; WO 0045426 A1 20000803

DOCDB simple family (application)

**EP 99200235 A 19990127**; AU 2544900 A 20000126; EP 0000586 W 20000126; EP 00903637 A 20000126