Title (en)

A method of forming a multi-layered dual-polysilicon structure

Title (de)

Verfahren zur Herstellung einer vielschichtigen Doppel-Polysiliziumstruktur

Title (fr)

Procédé pour fabriquer une structure multicouches double en polysilicium

Publication

**EP 1047127 B8 20070228 (EN)**

Application

**EP 00303273 A 20000418**

Priority

US 29806899 A 19990422

Abstract (en)

[origin: EP1047127A2] First and second trenches of differing depths are formed in a first insulating layer (12), a second insulating layer and polysilicon material then being formed. Part of the polysilicon is removed and an implantation barrier (40) is formed. Forming a multilayer semiconductor structure (50) comprises: (i) forming two trenches of different depths in the first insulating layer (12); (ii) forming the second insulating layer in the trenches; (iii) forming polysilicon material in the trenches so they are substantially filled; (iv) removing a portion of the polysilicon so the top surface (18) of the first insulating layer is not coplanar with a top surface of the polysilicon remaining in the trenches; (v) forming an implantation barrier (40) in the trenches; and (vi) processing the implantation barrier in the trenches so its top surface (42) is coplanar with the top surface of the first insulating layer. An independent claim is also included for: the multilayered semiconductor structure comprising the layers described on a substrate.

[origin: EP1047127A2] A method of forming a multi-layered dual-polysilicon structure that forms a polysilicon gate (60) prior to formation of an ion implantation barrier (40) and that requires fewer steps, is more economical, and permits fabrication of more compact semiconductor circuits and devices than prior art methods. <IMAGE>

IPC 8 full level

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