

Title (en)

METHOD FOR THE PRODUCTION OF SONOS MEMORY CELLS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON SONOS-SPEICHERZELLEN

Title (fr)

PROCEDE POUR FABRIQUER DES CELLULES MEMOIRES SONOS

Publication

**EP 1535338 A2 20050601 (DE)**

Application

**EP 03794774 A 20030731**

Priority

- DE 0302576 W 20030731
- DE 10240893 A 20020904

Abstract (en)

[origin: WO2004025731A2] Disclosed is an Si body (1) in which a ditch (2) is created, the walls (4) of said ditch (2) being provided with a nitrogen implant (6). An oxide layer which is disposed between the source/drain areas (5) and a word line that is applied to the upper face grows thicker than a lower oxide layer of an ONO storage layer that is created on the ditch wall as a gate dielectric. A metal silicide layer can be created on the upper faces of the source/drain areas instead of the nitrogen implant in the ditch walls in order to accelerate oxide growth there.

IPC 1-7

**H01L 27/115**; **H01L 21/8246**; **H01L 29/792**; **H01L 21/336**

IPC 8 full level

**H01L 21/28** (2006.01); **H01L 21/336** (2006.01); **H01L 29/792** (2006.01); **H10B 20/00** (2023.01); **H10B 69/00** (2023.01)

CPC (source: EP US)

**H01L 29/40117** (2019.08 - EP US); **H01L 29/66833** (2013.01 - EP US); **H01L 29/792** (2013.01 - EP US); **H01L 29/7926** (2013.01 - EP US); **H10B 43/30** (2023.02 - EP US); **H10B 69/00** (2023.02 - EP US)

Cited by

EP3024033A1; DE102014223904A1; US10937696B2; EP4354512A2

Designated contracting state (EPC)

DE

DOCDB simple family (publication)

**WO 2004025731 A2 20040325**; **WO 2004025731 A3 20040819**; DE 10240893 A1 20040318; EP 1535338 A2 20050601; TW 200408067 A 20040516; TW I234240 B 20050611; US 2005196923 A1 20050908; US 7323388 B2 20080129

DOCDB simple family (application)

**DE 0302576 W 20030731**; DE 10240893 A 20020904; EP 03794774 A 20030731; TW 92121071 A 20030731; US 7269505 A 20050304