

Title (en)

METHOD FOR LATERAL ETCHING WITH HOLES FOR MAKING SEMICONDUCTOR DEVICES

Title (de)

SEITENÄTZUNGSVERFAHREN MITTELS LÖCHERN ZUR HERSTELLUNG VON HALBLEITERBAUELEMENTEN

Title (fr)

PROCEDE DE GRAVURE LATERALE PAR TROUS POUR FABRIQUER DES DISPOSITIFS SEMI-CONDUCTEURS

Publication

EP 1192653 A1 20020403 (FR)

Application

EP 00946027 A 20000627

Priority

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Abstract (en)

[origin: FR2795554A1] A stack of layers (14-17) formed on a main surface of a silicon substrate (12) includes at least one assembly of two layers, of which the lower is germanium or a combination of germanium and silicon (14, 16), with an upper layer of silicon (15, 17). When the stack comprises more than one assembly of two layers, it has a first assembly (14, 15) immediately adjacent to the substrate and a last assembly (16, 17) furthest from it. On the uppermost layer of silicon, a thin dielectric gate layer (18) and a gate (19) are formed. Source and drain regions (22, 23) are formed along two opposite sides of the gate, in the thin gate dielectric layer and in the stack. At least one hole (25) is etched into the stack, at least to the lower layer of germanium or the combination cited. Selective lateral etching follows through the hole, to form tunnels (26, 27) below the grid (19) and optionally internal passivation, or filling of the tunnels with dielectric.

IPC 1-7

H01L 21/336; **H01L 29/786**; **H01L 29/51**

IPC 8 full level

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Citation (search report)

See references of WO 0101477A1

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