Title (en)

METHOD FOR ASSEMBLING SUBSTRATES BY DEPOSITING AN OXIDE OR NITRIDE THIN BONDING LAYER

Title (de)

VERFAHREN ZUM ASSEMBLIEREN VON SUBSTRATEN DURCH ABLAGERN EINER DÜNNEN OXID- ODER NITRID-BONDSHICHT

Title (fr)

PROCEDE D'ASSEMBLAGE DE SUBSTRATS PAR DEPOT D'UNE COUCHE MINCE DE COLLAGE D'OXYDE OU DE NITRURE

Publication

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Application

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Abstract (en)

[origin: WO2007006914A1] The invention relates to a method for assembling by molecular bonding two substrates, at least one of which is made of a semiconductor material characterised in that one of substrates, called a first substrate, comprises a surface (A), whose at least one part is flat and provided with an initial surface roughness compatible with the molecular bonding. The inventive method consists in depositing a thin oxide or nitride bonding layer (16a, 16b), whose thickness ranges from 10 to 20 nm, on at least one portion (14a, 14b) of the surface flat part (A) of the first substrate for carrying out a molecular bonding without pre-polishing, in saturating the thin bonding layer with hydroxyl groups, in bringing the thin bonding layer (16a, 16b) saturated with hydroxyl groups into contact with the second substrate (10) surface (B) which is at least locally flat with respect to the flat part of the surface (A) and saturated with hydroxyl groups and in carrying out a hydrophilic molecular bonding between said two substrates.

IPC 8 full level

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CPC (source: EP US)

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