TITLE OF THE INVENTION: METHOD FOR TRANSFERRING A THIN FILM ONTO A SUPPORT SUBSTRATE

Abstract:

The invention relates to a method for transferring a thin film onto a support substrate, which comprises: providing a bonded assembly that comprises a donor substrate and the support substrate, assembled by direct bonding at their respective front faces, following a bonding interface, the bonded assembly having a local unbonded area within this bonding interface, the donor substrate further comprising a buried brittle plane; separating along the buried brittle plane, initiated at the local unbonded area after microcrack growth in said plane by thermal activation, the separation resulting in the transfer of a thin film from the donor substrate to the support substrate. The method is characterized in that the local unbonded area is generated solely by a roughened area, produced deliberately on at least one of the front faces of the donor and support substrates prior to assembly, free of topology and having a predetermined roughness with an amplitude of between 0.5 nm RMS and 60.0 nm RMS.

Fig. 3b