TITLE OF 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, comprising the following steps: - supplying a bonded structure comprising a donor substrate and the support substrate, assembled by direct bonding at the respective front faces thereof along a bonding interface, the donor substrate comprising a buried brittle plane, - applying a fracture heat treatment to the bonded structure to induce spontaneous separation along the buried brittle plane, associated with the growth of microcracks in said plane through thermal activation, the separation leading to the transfer of a thin film from the donor substrate to the support substrate. The method is notable in that the fracture heat treatment exhibits: - a temperature-rise rate in excess of 1°C/s, at least between an initial temperature lower than 250°C and a plateau temperature greater than or equal to 500°C, and - a temperature profile such that the bonded structure is subjected to a temperature gradient varying between 40°C and 120°C between a central region and a peripheral region.

Fig. 5