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(54) **Title:** IMPROVING THE QUALITY OF A THIN LAYER THROUGH HIGH-TEMPERATURE THERMAL ANNEALING

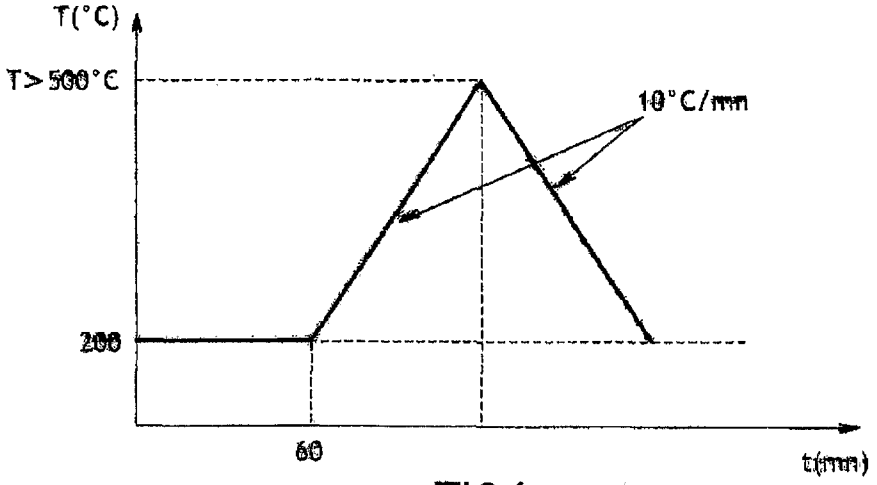


FIG.1

(57) **Abstract:** The invention relates to a method for forming a structure comprising a layer in a semiconductor material taken from a donor substrate, the method comprising the following successive steps, (a) implantation of atomic species to form a zone of embrittlement in the donor substrate at a given depth; (b) assembly of the donor substrate to a receiver substrate; (c) supply of energy to detach the layer taken from.the donor substrate at the embrittlement zone by implementing detachment annealing carried out at high temperature; (d) finishing treatment of the layer taken in view of improving its surface condition, characterized in that in detachment step (c), the high-temperature detachment annealing develops according to an upgrade allowing a high temperature to be reached, said high temperature corresponding to the maximum temperature of the detachment annealing and in that the duration of exposure to said high temperature is limited in such a way as to prevent the appearance of significant defectivity at the surface of the structure obtained after detachment.

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