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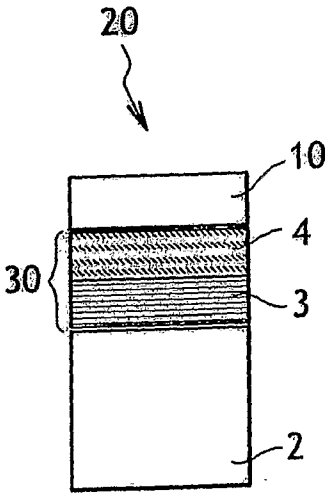
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(54) Title: IMPROVED PROCESS FOR TRANSFER OF A THIN LAYER FORMED IN A SUBSTRATE WITH VACANCY CLUSTERS



(57) Abstract: Methods for forming semiconductor structures comprising a layer transferred from a donor substrate are provided in which the resulting structure has improved quality with respect of defects, and resulting structures therefrom. For example, a semiconductor on insulator (SeOI) structure can be formed by a method comprising: - providing a donor substrate (1) having a first density of vacancy clusters; - providing an insulating layer (3); - transferring a thin layer (10) from the donor substrate (1) to a support substrate (2) with the insulating layer (3) thereon; - curing the transferred thin layer (10) to reduce the first density of vacancy clusters to a second density; and being characterized in that the step of providing an insulating layer (30) comprises providing an oxygen barrier layer (4) to be in contact with the transferred thin layer (10), said oxygen barrier layer limiting diffusion of oxygen towards the thin layer during the curing.

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