

A METHOD OF FABRICATING A COMPOSITE SUBSTRATE WITH
IMPROVED ELECTRICAL PROPERTIES

A B S T R A C T

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The invention concerns a method of fabricating a composite substrate (4) comprising at least one thin insulating layer (32) interposed between a support substrate (1) and an active layer of semiconductor material (21).

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The method is remarkable in that it comprises, in the following order, the steps of:

- forming or depositing an insulating layer (32) on a source substrate, and optionally an insulating layer (31) on said support substrate (1);

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- recovery heat treatment of said insulating layer (32) and optionally of said insulating layer (31) formed on the support substrate (1);

- plasma activation of at least one of the two faces intended to be bonded;

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- bonding the two substrates by molecular bonding, such that said insulating layer (32) is located between them; and

- lifting off a portion of said source substrate, to retain only a thickness of material constituting said active layer (21).

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This method can produce a substrate (4) with improved electrical properties.

30 Fig. 2F