Title (en)

DONOR SUBSTRATE FOR THE TRANSFER OF A THIN LAYER AND ASSOCIATED TRANSFER METHOD

Title (de)

DONORSUBSTRAT FÜR DEN TRANSFER EINER DÜNNSCHICHT UND ZUGEHÖRIGES TRANSFERVERFAHREN

Title (fr)

SUBSTRAT DONNEUR POUR LE TRANSFERT D'UNE COUCHE MINCE ET PROCEDE DE TRANSFERT ASSOCIE

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Application

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Abstract (en)

[origin: WO2022117930A2] The invention relates to a donor substrate (100) for the transfer of a thin single-crystal layer (1) made of a first material to a receiver substrate (2), the donor substrate (100) having a front side (100a) and a back side (100b), and comprising: - a buried weakened plane (30) which delineates an upper portion (101) from a lower portion (102) of the donor substrate (100); - in the upper portion (101), a first layer (10) on the side of the front side (100a), a second layer (20) adjacent to the buried weakened plane (30), and a stop layer (15) inserted between the first layer (10) and the second layer (20), the first layer (10) being composed of the first material, the stop layer (15) being formed of a second material that allows selective etching with respect to the first material to be achieved; - an amorphized sub-portion (101',101'',101'''), made amorphous through ion implantation, having a thickness strictly lower than that of the upper portion (101), and including at least the first layer (10); the second layer (20) comprising at least one single-crystal sub-layer (22), adjacent to the buried weakened plane (30). The invention also relates to two modes of implementation of a method for transferring a thin single-crystal layer (1) from the donor substrate (100).

IPC 8 full level

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