

Title (en)

METHOD FOR PRODUCING A SUBSTRATE FOR EPITAXIAL GROWTH OF A GALLIUM-BASED III-N ALLOY LAYER

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES SUBSTRATS FÜR EPITAKTISCHES WACHSTUM EINER GALLIUMBASIERTEN III-N-
LEGIERUNGSSCHICHT

Title (fr)

PROCÉDÉ DE FABRICATION D'UN SUBSTRAT POUR LA CROISSANCE ÉPITAXIALE D'UNE COUCHE D'UN ALLIAGE III-N À BASE DE
GALLIUM

Publication

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Application

EP 21801585 A 20211004

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Abstract (en)

[origin: WO2022074318A1] The invention relates to a method for producing a substrate for the epitaxial growth of a gallium-based III-N alloy layer, comprising the following consecutive steps: - providing a donor substrate (10) of semi-insulating monocrystalline silicon carbide, - implanting ionic species in the donor substrate (10) so as to form a zone of weakness (12) defining a thin layer (11) of semi-insulating monocrystalline SiC to be transferred, - bonding the donor substrate (10) to a first receiving substrate (20) by means of a bonding layer (21), - detaching the donor substrate (10) along the zone of weakness (12) so as to transfer the thin layer (11) of semi-insulating monocrystalline SiC on to the first receiving substrate (20), - forming an additional layer (13) of semi-insulating SiC on the transferred thin layer (11), - bonding the additional layer (13) to a second receiving substrate (40) with high electrical resistivity, - removing at least a portion of the bonding layer (21) so as to detach the first receiving substrate (20) and expose the layer (11) of transferred semi-insulating monocrystalline SiC.

IPC 8 full level

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