Title (en)

PSEUDO-SUBSTRATE FOR USE IN THE PRODUCTION OF SEMICONDUCTOR COMPONENTS AND METHOD FOR PRODUCING A PSEUDO-SUBSTRATE

Title (de)

PSEUDOSUBSTRAT ZUR VERWENDUNG BEI DER HERSTELLUNG VON HALBLEITERBAUELEMENTEN UND VERFAHREN ZUR HERSTELLUNG EINES PSEUDOSUBSTRATES

Title (fr)

PSEUDO-SUBSTRAT DESTINÉ À ÊTRE UTILISÉ POUR LA FABRICATION DE COMPOSANTS À SEMI-CONDUCTEURS ET PROCÉDÉ DE FABRICATION D'UN PSEUDO-SUBSTRAT

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Application

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Abstract (en)

[origin: WO2012022442A1] The invention relates to a pseudo-substrate (1, 11) for use in the production of semiconductor components, comprising a carrier substrate (2, 12) having a crystalline structure and a first buffer (3, 13), which is arranged on a surface of the carrier substrate (2, 12), if appropriate on further intervening intermediate layers, wherein the first buffer (3, 13) is embodied as a single layer or as a multilayer system and comprises, at least at the surface facing away from the carrier substrate (2, 12), arsenic (As) and at least one of the elements aluminium (Al) and indium (In). The invention is characterized in that a second buffer (4, 14) is additionally arranged on a side of the first buffer (3, 13) facing away from the carrier substrate (2, 12), if appropriate on further intervening intermediate layers, said second buffer being embodied as a single layer or as a multilayer system, wherein the second buffer (4, 14) is embodied such that it comprises, at a first surface facing the first buffer (3, 13) arsenic and at least one of the elements aluminium and indium and comprises, at a second surface facing away from the first buffer (3, 13) antimony (Sb) and at least one of the elements aluminium and indium, and wherein the second buffer is embodied with a decreasing proportion of arsenic and with an increasing proportion of antimony in each case proceeding from the first surface towards the second surface. The invention furthermore relates to a method for producing a pseudo-substrate (1, 11).

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