

## Title (en)

METHOD AND DEVICE FOR PRODUCING GROUP III-N, GROUP III-V-N AND METAL-NITROGEN COMPONENT STRUCTURES ON SI SUBSTRATES

## Title (de)

VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG VON GRUPPE-III-N, GRUPPE-III-V-N UND METALL-STICKSTOFF-BAUELEMENTSTRUKTUREN AUF Si-SUBSTRATEN

## Title (fr)

PROCEDE ET DISPOSITIF PERMETTANT DE PRODUIRE DES STRUCTURES DE COMPOSANTS GROUPE-III-N, GROUPE-III-V-N ET METAL-AZOTE SUR DES SUBSTRATS SI

## Publication

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## Application

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## Abstract (en)

[origin: WO0165592A2] The invention relates to a method and a device for producing Group-III-N, Group-III-V-N and metal-nitrogen component structures on Si substrates by means of organometallic gas phase epitaxy. The inventive method and the corresponding device are characterised in that a low-temperature germination layer and/or a low-temperature buffer layer is/are produced from a Group III-V semiconductor and/or a metal-Group V connecting semiconductor and a component layer or sequence of layers is produced from Group-III-N, Group-III-V-N or metal-Group-V semiconductors in a horizontal growth chamber, in that a minimal lateral temperature difference of less than 5 K, preferably less than 1K, an adjustable roof temperature and/or wall temperature and a temperature on a substrate holder that is caused to rotate by a gas cushion are maintained, the reaction gases being introduced in such a way as to prevent any unwanted interaction between the starting gases and in such a way that the procedure can be observed without disturbing the growth process.

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## IPC 8 full level

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