

Title (en)  
NUCLEATION LAYER DEPOSITION METHOD

Title (de)  
NUKLEATIONSSCHICHT-ABSCHIEDEVERFAHREN

Title (fr)  
PROCÉDÉ DE SÉPARATION DE COUCHE DE NUCLÉATION

Publication  
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Application  
**EP 19718284 A 20190410**

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Abstract (en)  
[origin: WO2019197433A1] The invention relates to a method for depositing a nucleation layer (3) comprised of elements of the main groups III and V directly onto the surface (2) of a substrate (1) made of an element of the main group IV, wherein together with a first gaseous starting material containing the element of the main group III, a second gaseous starting material containing the element of the main group V is introduced at a process temperature of greater than 500°C into a process chamber (8) containing the substrate (1). It is essential that at least at the start of the deposition process, a third gaseous starting material containing an element of the main group IV is fed into the process chamber (8), together with the first and second gaseous starting material, which third gaseous starting material develops an n-doping effect in the deposited III-V crystal, wherein a damping decrease is achieved at a dopant concentration of  $< 1 \times 10^{18} \text{cm}^{-3}$ .

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