

Method and device for depositing n-doped SiC

Abstract

The invention relates to a method for depositing an SiC layer, wherein an NH_3 -containing first doping gas flow (D1), a second N_2 -containing doping gas flow (D2), a C_2H_4 -containing first growth gas flow (Q1) and an HCl_3Si -containing second growth gas flow (Q2) flow in a horizontal direction over a heated substrate. The two doping gas flows (D1, D2) are fed, in a manner controlled separately from one another, into a process chamber (2) through gas inlet zones (4, 5, 6) arranged vertically one above the other. The mass flows of the doping gas flows (D1, D2) or the vertical position of the gas inlet zones (4, 5, 6) through which the two doping gas flows (D1, D2) flow are selected such that they generate first and second doping profiles (a, b) which are oppositely curved in relation to one another such that by way of a beneficial selection of the ratio of the doping gas flows (D1, D2), a homogeneous dopant profile can be achieved in the deposited layer.

Fig. 1