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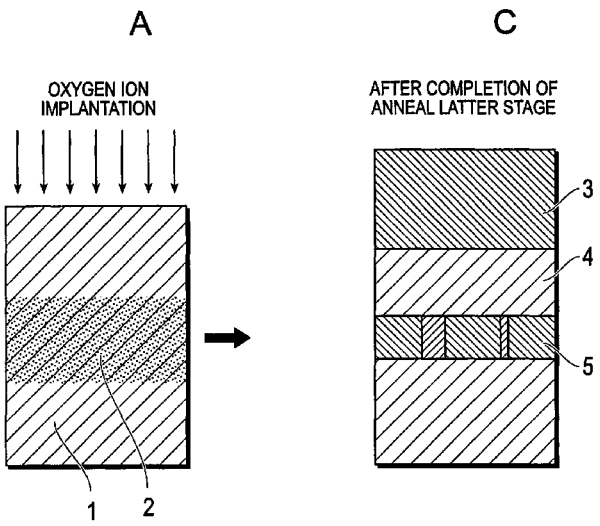
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(54) Title: SIMOX SUBSTRATE AND METHOD FOR PRODUCTION THEREOF



(57) Abstract: A SIMOX substrate having a buried oxide layer and a surface single crystal silicon layer formed therein is produced by a method which comprises implanting oxygen ions into a silicon single crystal substrate and subsequently performing a heat treatment at an elevated temperature on the substrate. The method is characterized by performing the former stage of the heat treatment at a temperature of not lower than 1150°C and lower than the melting point of single crystal silicon in an atmosphere obtained by adding oxygen under a partial pressure of not more than 1% to an inert gas and subsequently performing at least part of the latter stage of the heat treatment by increasing the partial pressure of oxygen within a range in which no internal oxidation is suffered to occur in the buried oxide layer. It can also be prepared by performing the former stage of the high temperature heat treatment at a temperature of not lower than 1150°C and lower than the melting point of silicon under in inert gas atmosphere containing not more than 1 vol.% of oxygen and performing ITOX treatment of the buried oxide layer at a temperature of not more than 1300°C.

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