Abstract

Method for producing epitaxially coated silicon wafers

A method for producing epitaxially coated silicon wafers, in which a multiplicity of silicon wafers which are polished at least on their front sides are provided and successively coated individually in each case in an epitaxy reactor by a procedure in which a respective one of the silicon wafers provided is placed on a susceptor in the epitaxy reactor, and is pretreated in a first step only under a hydrogen atmosphere at a hydrogen flow rate of 1-100 slm and in a second step with addition of an etching medium to the hydrogen atmosphere at a hydrogen flow rate of 1-100 slm, at a flow rate of the etching medium of 0.5-1.5 slm and at an average temperature of 950-1050°C, and is subsequently coated epitaxially on its polished front side and is removed from the epitaxy reactor, wherein, during the second step of the pretreatment, the power of heating elements arranged above and below the susceptor is regulated in such a way that there is a temperature difference of 5-30°C between a radially symmetrical region - encompassing the central axis - of the silicon wafer to be epitaxially coated and a part of the silicon wafer that lies outside said region.

Fig. 1