Abstract

Epitaxially coated silicon wafer and method for the epitaxial coating of a silicon wafer

The invention relates to 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, is pretreated under a hydrogen atmosphere at a first hydrogen flow rate in a first step and with addition of an etching medium to the hydrogen atmosphere at a second, reduced hydrogen flow rate in a second step, is subsequently coated epitaxially on its polished front side and is removed from the epitaxy reactor, and furthermore an etching treatment of the susceptor is effected in each case after a specific number of epitaxial coatings.

The invention also relates to a silicon wafer having a front side and a rear side, at least its front side being polished and an epitaxial layer being applied at least on its front side, and which has a global flatness value GBIR of 0.07-0.3 µm relative to an edge exclusion of 2 mm.

Figure 5