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Abstract:

Method for depositing a layer on a semiconductor wafer by means of CVD and chamber for carrying out the method

The invention relates to a method for depositing a layer on a semiconductor wafer by means of CVD, wherein a deposition gas is conducted through a channel bounded at the top by a window that is transmissive to thermal radiation, and at the bottom by a plane E in which the surface of the semiconductor wafer to be coated lies. The speed at which the deposition gas is conducted over the semiconductor wafer is varied, by virtue of the fact that the distance D between the plane and the window is chosen in such a way that it is larger in a center region of the window and in an edge region of the window on the outside than on the inside, and a tangent applied to the radial profile of the distance at the boundary between the center region and the edge region forms with the plane an angle of not less than 15° and not more than 25°, wherein the center region of the window is an inner region of the window that covers the semiconductor wafer, and the edge region of the window is an outer region of the window that does not cover the semiconductor wafer. The invention furthermore relates to a chamber for depositing a layer on a semiconductor wafer by means of CVD, and a semiconductor wafer comprising an epitaxial layer.

Abstract:

