CLAIMS

1. An apparatus for depositing a layer of semiconductor material on a substrate wafer, comprising
a base ring between an upper and a lower dome;
a susceptor as carrier of the substrate wafer during the deposition of the layer;
a gas inlet and a gas outlet, an outgoing gas line and also gas supply lines for passing process gas over an upper side face of the substrate wafer;
a slit valve tunnel and a slit valve door; and
a lifting and rotating means for lifting and turning the susceptor and the substrate wafer,
characterized in that one or more apparatus constituents consisting of stainless steel are covered with a functionalized silica-like coating, a-SiO_x:CH_y, and
characterized in that the stainless steel constituents are the base ring, the gas inlet, the gas outlet, the gas supply lines, the outgoing gas line including a bellows and a cone, the slit valve tunnel, the slit valve door, and the lifting and rotating means.

2. The apparatus as claimed in claim 1, characterized in that it is configured as a single-wafer reactor.

3. The apparatus as claimed in any of claims 1-2, characterized in that it is designed for depositing an epitaxial layer on the substrate wafer under standard pressure.

4. A method for depositing an epitaxial layer of semiconductor material on a substrate wafer, characterized in that the substrate wafer is coated with the epitaxial layer in an apparatus as claimed in any of claims 1-3.