

Wafer Chuck, Device and Method for Detaching a Substrate

Abstract

This invention relates to a method for detaching a first substrate (2) which is connected to a second substrate (4) by an interconnect layer (3, 3', 3'', 3''', 3^{IV}) from the second substrate (4) by embrittlement of the interconnect layer (3, 3', 3'', 3''', 3^{IV}).

Furthermore this invention relates to a corresponding device.

Moreover this invention relates to a method for bonding of a first substrate (2) to a second substrate (4) with an interconnect layer (3, 3', 3'', 3''', 3^{IV}) which can be embrittled in particular by cooling.

Furthermore this invention relates to a use of a material which can be embrittled for producing an interconnect layer (3, 3', 3'', 3''', 3^{IV}) between a first substrate (2) and a second substrate (4) for forming a substrate stack (1, 1', 1'', 1''', 1^{IV}, 1^V) which has been formed from the first substrate (2), the second substrate (4) and the interconnect layer (3, 3', 3'', 3''', 3^{IV}) which is located in between.

Moreover this invention relates to a substrate stack, formed from a first substrate (2), a second substrate (4) and an interconnect layer (3, 3', 3'', 3''', 3^{IV}) which is located in between, the interconnect layer (3, 3', 3'', 3''', 3^{IV}) being formed from a material which can be embrittled.

In addition this invention relates to a wafer chuck for holding a first substrate (2) when the first substrate (2) is being detached from a second substrate (4) with fixing means which can be activated by lowering the temperature.

Figure 10 in this respect