Method for Permanent Bonding of Wafers

Abstract

This invention relates to a method for bonding of a first contact surface (3) of a first substrate (1) to a second contact surface (4) of a second substrate (2) with the following steps, especially the following sequence:

- forming at least one reservoir (5, 5') in at least one reservoir formation layer (6, 6') on the first substrate (1) and/or the second substrate (2), the reservoir (5, 5') consisting especially at least largely of an amorphous material,
- at least partial filling of the reservoir/reservoirs (5, 5') with a first educt or a first group of educts,
- forming or applying a reaction layer (17) which contains a second educt or a second group of educts to the reservoir (5) and/or the reservoir (5'),
- the first contact surface (3) making contact with the second contact surface (4) for formation of a prebond connection,
- forming a permanent bond between the first and second contact surface (3, 4), at least partially strengthened by the reaction of the first educt or the first group with the second educt or the second group.

Figure 5