

CLAIMS

1. A method for prefixing substrates (1, 2), whereby at least one substrate surface (1o, 2o) of the substrates (1, 2) is amorphized in at least one surface area, characterized in that the substrates (1, 2) are aligned and then make contact on the amorphized surface areas and are prefixed only at partial surfaces, wherein local application of force is used to reach equivalent pressure for spontaneous bonds in the partial surfaces and thereby to prefix the substrates (1, 2).
2. The method according to claim 1, wherein the alignment and the prefixing are carried out in a first module chamber at a pressure of less than 1 bar.
3. The method according to one of the preceding claims, in which the alignment is carried out with an alignment accuracy of less than 100 μm .
4. The method according to one of the preceding claims, wherein the prefixing has a bond strength of between 0.01 J/m^2 and 5 J/m^2 .
5. The method according to one of the preceding claims, wherein the prefixing is carried out by local energy input.
6. The method according to one of claims 1 to 4, wherein the prefixing is carried out from a side that faces away from the substrate surface (1o, 2o) with which contact is to be made.
7. The method according to one of the preceding claims, wherein at least one of the substrate surfaces (1o, 2o) has/have a mean roughness index Ra of less than 20 nm.
8. The method according to one of claims 1 to 6, wherein all of the substrate surfaces (1o, 2o) has/have a mean roughness index Ra of less than 20 nm.
9. A method for permanent bonding of the substrates (1, 2) that are prefixed, according to one of the preceding claims, on the substrate surfaces (1o, 2o).

10. The method according to claim 9, wherein the bonding is carried out in a second module chamber, wherein the second module chamber is connected to the first module chamber by a sluice.

11. The method according to claim 9 or 10, wherein a transport of the prefixed substrates (1, 2) is carried out with a robotic arm and without a receiving system for seating the prefixed substrates (1, 2).

12. A device for prefixing substrates (1, 2) with
at least one pretreatment system for pretreating at least one substrate surface (1o, 2o) of the substrates (1, 2) in at least one surface area,
an alignment system for aligning the substrates (1, 2), and
a prefixing system, downstream from the alignment system, for making contact with and prefixing the aligned substrates (1, 2) on the pretreated surface areas, wherein the prefixing is done only at partial surfaces, wherein local application of force is used to reach equivalent pressure for spontaneous bonds in the partial surfaces and thereby to prefix the substrates (1, 2).

13. The device according to claim 12, wherein the pretreatment of the surface areas comprises amorphization of the surface areas.