temperature changes as a function of time. Thus, the bond wave is subject to different temperatures at different times or to put it another way, at different positions, and therefore creates the above-mentioned run-out faults.

Embodiments of the present invention overcome the disadvantages of the prior art and in particular to show an improved substrate holder and an improved method, with the aid of which the run-out fault can be compensated and in particular prevented altogether.

According to a first aspect of the present invention, there is provided a substrate holder, having a fixing surface for holding a substrate, characterised in that the substrate holder has a heat-conducting body for dissipating heat away from the fixing surface, wherein the heat is dissipated to the rear side of the substrate holder, wherein at the rear side of the substrate holder a heat exchanger is arranged for dissipating the heat.

According to a second aspect of the present invention, there is provided a system for bonding a first substrate to a second substrate having at least one, in particular upper, the above substrate holder for holding at least one of the two substrates.

According to a third aspect of the present invention, there is provided a use of the above substrate holder as upper substrate holder.

According to a fourth aspect of the present invention, there is provided a method for bonding a first substrate to a second substrate, wherein the

substrates are brought closer together in a first step, so that the temperature of the first substrate is increased, wherein in a second step, the bringing together of the substrates is stopped and a distance between the substrates is kept constant in such a manner that at a constant distance at least for a period of time, a constant temperature of the first substrate is set, wherein in a third step, within the time period at constant temperature of the first substrate, the two substrates are bonded to one another, at least temporarily.

According to a fifth aspect of the present invention, there is provided a product, particularly a substrate stack, having a first substrate and a second substrate, wherein the substrates are bonded to one another using the above method.

According to the sixth aspect of the present invention, there is provided a use of the above substrate holder for holding a substrate during the above method.

All combinations of at least two features specified in the description, the claims and/or the drawings also fall within the scope of the invention. When value ranges are given, values lying inside the limits mentioned should also be considered as disclosed as limit values and claimable in any desired combination.

The core of the invention in particular consists in designing the in particular upper substrate holder (also termed the first substrate holder in the following) according to the invention in such a manner that any heat that is absorbed, particularly to the rear side of the substrate holder, is dissipated in a controlled manner and emitted there by means of a heat exchanger, so that a heating of the fixed, in particular upper substrate (also termed the first substrate in the following), can be set in a targeted manner.

A further important aspect of the invention consists in the targeted optimisation of the thermal resistances of the system, in order to enable a targeted setting according to the invention of the temperature difference ΔT.