ABSTRACT

METHOD FOR TRANSFERRING A MONOCRYSTALLINE SEMICONDUCTOR LAYER ONTO A SUPPORT SUBSTRATE

The invention relates to a method for transferring a monocrystalline semiconductor layer (3) onto a support substrate (1), comprising the following steps:

(a) implanting species in a donor substrate (31);

(b) bonding the donor substrate (31) to said support substrate (1);

(c) fracturing the donor substrate (31) to transfer the layer (3) onto the support substrate (1);

and steps wherein:

- a portion (34) of the monocrystalline layer (3) to be transferred is rendered amorphous, without disorganizing the crystal lattice of a second portion (35) of said layer (3), said portions (34, 35) being, respectively, a surface portion and a buried portion of the monocrystalline layer (3);
- said amorphous portion (34) is recrystallized at a temperature below 500 °C, the crystal lattice of said second portion (35) serving as a seed for recrystallization.

Figure 2B