Method for forming a Ge on III/V-On-Insulator structure

ABSTRACT OF THE DISCLOSURE

The present invention concerns a method for forming a Semiconductor-On-Insulator structure (10) that includes a semiconductor layer (3) of III/V material, characterized in that it comprises the steps of:

(a) growing a relaxed germanium layer (2) on a donor substrate (1);

(b) growing at least one layer (3) of III/V material on the layer of germanium (2);

(c) forming a cleaving plane (6) in the relaxed germanium layer (2);

(d) transferring a cleaved part of the donor substrate (1) to a support substrate (4), the cleaved part being a part of the donor substrate (1) cleaved at the cleaving plane (6) that comprises the at least one layer (3) of III/V material.

The present invention also concerns a Ge on III/V-On-Insulator structure, a NFET transistor, a method for manufacturing a NFET transistor, a PFET transistor, and a method for manufacturing a PFET transistor.

Figure 1