ABSTRACT

Method for producing a microelectronic device on FD-SOI substrate, corresponding device and integrated circuit incorporating same

The production of a microelectronic device on FD-SOI substrate comprises: forming, in the substrate (11) of a first wafer, first wells of insulating material adapted to form shallow isolation trenches (STI) (14); forming, on a second wafer, a strained silicon (sSi) film (23) covered with a layer of oxide (24); bonding the second wafer on the first wafer after it is turned over vertically, such that the layer of oxide becomes a layer of buried oxide (BOX), covered by the sSi film which thus becomes a film of strained silicon on insulator; removing the donor substrate while leaving behind the BOX layer and the sSi film; and forming second isolation trenches SSTI (34) by local oxidation of the silicon of the sSi film, which join up with the STI via the BOX, so as to form complex isolation structures (STI-BOX-SSTI).

(Fig. 11)