METHOD FOR MANUFACTURING SOI SUBSTRATE

ABSTRACT OF THE DISCLOSURE

An insulating layer is formed over a surface of a semiconductor wafer to be the bond substrate and irradiation with accelerated ions is performed, so that an embrittlement region is formed inside the wafer. Next, this semiconductor wafer and a base substrate such as a glass substrate or a semiconductor wafer are attached to each other. Then, the semiconductor wafer is divided at the embrittlement region by heat treatment, whereby an SOI substrate is manufactured in which a semiconductor layer is provided over the base substrate with the insulating layer interposed therebetween. Before this SOI substrate is manufactured, heat treatment is performed on the semiconductor wafer at 1100 °C or higher under a non-oxidizing atmosphere such as an argon gas atmosphere or a mixed atmosphere of an oxygen gas and a nitrogen gas.

Figure 1