METHOD FOR MANUFACTURING SOI SUBSTRATE AND SOI SUBSTRATE

ABSTRACT OF THE DISCLOSURE

A method is demonstrated to form an SOI substrate having a silicon layer with reduced surface roughness in a high yield. The method includes the step of bonding a base substrate such as a glass substrate and a bond substrate such as a single crystal semiconductor substrate to each other, where a region in which bonding of the base substrate with the bond substrate cannot be performed is provided at the interface therebetween. Specifically, the method is exemplified by the combination of: irradiating the bond substrate with accelerated ions; forming an insulating layer over the bond substrate; forming a region in which bonding cannot be performed in part of the surface of the bond substrate; bonding the bond substrate and the base substrate to each other with the insulating layer therebetween; and separating the bond substrate from the base substrate, leaving a semiconductor layer over the base substrate.

Figure 1E