METHOD FOR MANUFACTURING BONDED SOI WAFER AND BONDED SOI WAFER MANUFACTURED THEREBY

ABSTRACT OF THE DISCLOSURE

A bonded SOI wafer is manufactured by performing bonding in a state where organics exist on a surface of an active layer wafer and/or on a surface of a supporting wafer and performing heat-treating for bonding reinforcement in a state where the organics are trapped at an interface between the active layer wafer and the supporting wafer to form crystal defects at an interface between the active layer wafer and the oxide film and/or at an interface between the supporting wafer and the oxide film. This allows a simple and inexpensive gettering source to be formed at the interface between an SOI layer and an insulating layer (oxide film). Also, the bonded SOI wafer of the present invention that is manufactured by this method can effectively remove heavy-metal impurities that may have a negative impact on the characteristics of the device and/or the withstand voltage characteristics of the oxide film. Therefore, the manufacturing method and the bonded SOI wafer according to the present invention can be utilized widely as an SOI wafer with improved device characteristics or as a manufacturing method thereof.