METHOD FOR REPROCESSING SEMICONDUCTOR SUBSTRATE, METHOD FOR MANUFACTURING REPROCESSED SEMICONDUCTOR SUBSTRATE, AND METHOD FOR MANUFACTURING SOI SUBSTRATE

ABSTRACT OF THE DISCLOSURE

A method suitable to reprocess a semiconductor substrate is provided. A semiconductor substrate in which a projection including a damaged semiconductor region and an insulating layer is provided in a peripheral portion of the semiconductor substrate is subjected to etching treatment for removing the insulating layer and to etching treatment for removing the damaged semiconductor region selectively with a non-damaged semiconductor region left using a mixed solution including nitric acid, a substance dissolving a semiconductor material included in the semiconductor substrate and oxidized by the nitric acid, a substance controlling a speed of oxidation of the semiconductor material and a speed of dissolution of the oxidized semiconductor material, and nitrous acid, in which the concentration of the nitrous acid is higher than or equal to 10 mg/l and lower than or equal to 1000 mg/l. Through these steps, the semiconductor substrate is reprocessed.

Figure 2A