ABSTRACT

A supporting substrate (10) having a flat supporting face is integrated with a semiconductor wafer W while supporting the surface thereof on the supporting face of the supporting substrate (10). The semiconductor wafer W integrated with the supporting substrate (10) is polished or etched on the back thereof using a thinning device and a film is formed on the back of the semiconductor wafer W integrated with the supporting substrate (10) using a film forming device (40). Since the semiconductor wafer W is integrated with the supporting substrate, even a semiconductor wafer as thin as 100 μm or less is not warped and thereby the film can be formed uniformly.