

## ABSTRACT

Disclosed are an ion implanter and an ion implantation method. The ion implanter includes:  
a target disk, comprising a plurality of wafer placement sites arranged along a circumference,  
5 wherein the target disk rotates at a speed of less than 200 revolutions per minute; and an ion source,  
facing the target disk, and configured to perform scanning ion implantation on a surface of a wafer  
positioned in each of the wafer placement sites along a radial direction of the target disk, wherein  
a scanning frequency is greater than 500 Hz. According to the present disclosure, the target disk  
20 no longer needs to move up and down in a direction perpendicular to the direction of ion  
implantation to perform mechanical scanning, which greatly simplifies the motion mechanism of  
the disk and the difficulty of fabrication. The scanning frequency may be set to a high frequency  
greater than 500 Hz. With the target disk rotating at a speed of less than 200 revolutions per minute,  
the implantation uniformity still satisfies process requirements. In addition, the dosage loss due to  
overscan is avoided, and the implantation efficiency of the ion implanter is more than doubled.

(The most illustrative figure is FIG. 2)