

ABSTRACT

The present invention proposes a method for improving the uniformity of wafer electroplating thickness, comprising: performing the electroplating process on a wafer in an electroplating chamber provided with a diffuser plate; measuring the electroplating thickness on the wafer; inputting the electroplating thickness into a wafer model, dividing the wafer model into a plurality of concentric ring regions along the radial direction, and arranging a plurality of concentric ring regions corresponding to the wafer model on a diffuser plate model corresponding to the diffuser plate, wherein through holes with uniform aperture are uniformly distributed on the diffuser plate model; taking any electroplating thickness value as a reference value, calculating the differences between the electroplating thickness values of other ring regions of the wafer model and the reference value, and determining the pending adjustment rate of the electroplating thickness of each ring region of the wafer model; setting the pending adjustment rate of the total area of the through holes of each ring region on the diffuser plate model to be equal to the pending adjustment rate of the electroplating thickness of each ring region on the wafer model, and determining the pending adjustment value of the total area of the through holes of each ring region on the diffuser plate model, so as to obtain an optimized diffuser plate model. Through the optimization of the diffuser plate, the present invention improves the electroplating quality and makes the electroplating thickness of the wafer more uniform.