

Comparision of Measurement and Calculation for Thin Films Thickness Distribution Coated by Magnetron Sputter System

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We measured thin films thickness sputtered from Cu target in the magnetron sputter system. Thin films thickness is thin as integration power in target is large. Cu thin films thickness in 100 kWh integration watt was decreased by 20% when that of beginning was compared. But the shape of thin films thickness distribution was same.

For the calculation of thin films thickness distribution in the 100 kWh, the angular distribution data sputtered of Cu particles is necessary when Ar ions enter to inclined erosion surface of Cu target. We used the relation results of sputter yield and main angular distribution of sputtering particles emitted from Cu target published by G. Betz.

Keywords: angular distribution of particles, magnetron sputtering