Abstract

The aim of the present study is to calculate the effect of surface roughness to the optical constants of the materials via ellipsometry. In fact we saw from the theory how surface roughness effects the ellipsometrical constants, by which conditions, and how the mathematical equations are transformed. Particularly, we refer Ohlidal Franta's theory and we create the corresponding computational program in FORTRAN environment and then we applied it in the case of c-Si. From this part we saw the differences between the two spectras. Also we compare our results with those from Bedeaux and Vleiger's theory and saw the differences. At the end we refer the conclusions from this work and the future steps in this direction.