Determination of thin films thickness by tolansky interferometry

Farid Wadjdi Machmud, author

Deskripsi Lengkap: https://lib.ui.ac.id/detail?id=20316814&lokasi=lokal

----

Abstrak

A computerized interference pattern analysis has been developed for analyzing an interference pattern produced by the Tolansky interferometric arrangement. The purpose of the analysis is to obtain informations about the thickness of thin films deposited on smooth non-planar substrate. An approximation scheme employing the combination of Taylor expansion and Binomial theorem up to the third order has been developed along with the computer program which is shown to produce better result than the previous second order approximation. A simple prototype interferometer has been built for the measurement and the application of the analysis scheme. A discussion is given on the experimental and calculational aspects which are related to the accuracy of determination of the film thickness.