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**DEVELOPMENT OF A COMPUTER MODEL
REPRESENTING LOW TEMPERATURE
THIN FILM GROWTH**

A PROJECT REPORT PRESENTED

BY

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ABSTRACT

Title: Development of a computer model representing low temperature thin film growth.

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Summary:

During this study, growth of thin solid films was considered. A simple growth model, valid at low substrate temperatures, was proposed and it was solved by means of analytical techniques.

In particular, an expression was obtained for the area coverage $A_m(t)$ as a function of the layer number m and time t .

Subsequently a computer program was developed, using the programming language MATLAB, to simulate thin film growth at low temperatures. Program was coded in such a way to calculate the area coverage while the growth proceed.

Results obtained by means of computational methods are in excellent agreements with that obtained by analytical techniques.