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بالرسالة صفحات لم ترد بالاصل

**Preparation and Characterization of Porous Silicon Layers on
Silicon for Solar Energy Applications**

2.714P

**A Thesis Presented
To
Faculty of Science
Cairo University**

**By
Shaaban Abd El-Glil Ahmed Khalil
(B. Sc. 2005)
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**For
The Master of Science
(Chemistry)**

(2010)

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APPROVAL SHEET FOR SUBMISSION

Title of the M. Sc. thesis:

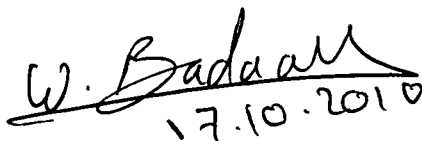
Preparation and characterization of porous silicon layers on silicon for solar energy applications

Name of the candidate: Shaaban Abd El-Glil Ahmed Khalil

This thesis has been approved for submission by the supervisors :

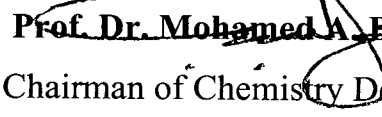
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17.10.2010

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Abstract

Name : Shaaban Abd El-Glil Ahmed Khalil

Title of thesis: Preparation and characterization of porous silicon layers on silicon for solar energy applications.

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(Abstract)

The thesis is aimed to study the solar spectrum in the Cairo Territory and preparation of suitable porous silicon layers on p-type silicon wafers to improve the solar conversion efficiency using metal-assisted chemical etching and the optimization of the conditions to obtain porous structure suitable for solar energy applications. Investigations are extended to include the properties of the prepared samples and characterization of the porous structure. In this respect, electrochemical impedance spectroscopy, EIS, scanning electron microscopy, SEM, and energy dispersive X-ray, EDX, were used as the main techniques.

Keywords: impedance, metal-assisted chemical etching, porous silicon.

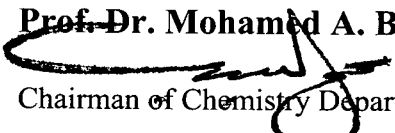
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