

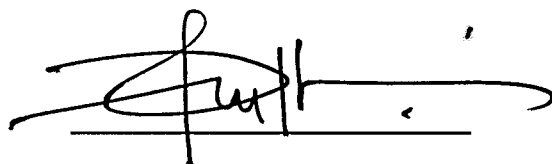
**FABRICATION OF TITANIUM DIOXIDE (TiO₂) ON POROUS
SILICON (PSi)**

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**Final Year Project Report Submitted In Partial
Fullfilment Of The Requirement For The
Bachelor Of Science (Hons.) Physics
Faculty Of Applied Science
Universiti Teknologi Mara**

NOVEMBER 2010

This Final Year Project entitled “Fabricaton of Titanium Dioxide (TiO₂) on Porous Silicon (PSi)” was submitted by Norhafizah binti Abd Razak, in partial fulfillment of the requirements for Degree of Science (Hons.) Physics in the Faculty of Applied Science, and was approved by

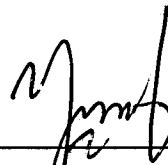


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ACKNOLEGEMENTS

In completion this Final Year Project, many people whether in group and individual are involved; without their involvement, I am sure that there difficulties that I have to face. Thus, here in opportunity, I would like to express millions of thank to those who given their fully support and cooperation during completing my Final Year Project.

I would like to dedicate my deepest gratitude to my supervisor, Prof. Dr. Saifollah Abdullah for his valuable guidance, help, information, encouragement throughout the duration of my project. I wish to thank Assoc. Prof Dr. Mohd Rusop Mahmood for the generous sharing of his knowledge and advice. Most unforgotten to all members in NANO-SciTech Centre (NST), especially to Pn. Asiah, En. Faez and Pn. Nurul who are always free and willing to help and share their knowledge with me.

My sincere appreciation also goes to my family and friends as the endless concern, financial support, moral support, and understanding and inspired me to complete this Final Year Project successfully.

Norhafizah binti And Razak

LIST OF CONTENT

	Page
ACKNOWLEDGEMENTS	iii
LIST OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF ABBREVIATIONS	viii
ABSTRACT	ix
CHAPTER 1 : INTRODUCTION	
1.1 : Background	1
1.2 : Problem statements	4
1.3 : Objectives	4
1.4 : Significant of project	4
CHAPTER 2 : LITERATURE REVIEW	
2.1 : Porous Silicon (PSi)	
2.1.1 : Properties	5
2.1.2 : Preparation method	7
2.1.3 : Application	8
2.2 : Titanium Dioxide (TiO ₂)	
2.2.1 : Properties	11
2.2.2 : Preparation method	12
2.2.3 : Applications	14
2.3 : TiO ₂ on Psi	
2.3.1 : Properties	16
2.3.2 : Preparation method	16
2.3.3 : Applications	19
CHAPTER 3 : METHODOLOGY	
3.1 : Flowchart of methodology	20
3.2 : Preparation of PSi by Electrochemical Etching Method	
3.2.1 : Materials	21
3.2.2 : Equipments	21
3.2.3 : Preparation	21
3.3 : Preparation of TiO ₂ Coating by Sol gel Method	

ABSTRACT

Titanium dioxide (TiO_2) is a material used in many applications either in form of powder, thin films and nanomaterial as well as nanorods. In this project, TiO_2 was fabricated on porous silicon (PSi) substrate. Coating of TiO_2 on PSi will be enhanced the absorption of light and very potential used in high performance cell fabrication. PSi was prepared by electrochemical method with $10\text{mA}/\text{cm}^2$ of current density and 20 min etching time. Sol gel method was used to prepare TiO_2 coating solution. The PSi substrate was then dipped in coating solution for fives times. The withdrawal speed was varied for 10, 20, 30, 40 and 50 mms^{-1} . Raman spectra and AFM were used to measure the properties.