

**OPTIMIZATION OF THE PREPARATION PARAMETER OF ZINC OXIDE
NANOWIRES**

FAUZIAH BINTI WAN MOHD NOOR

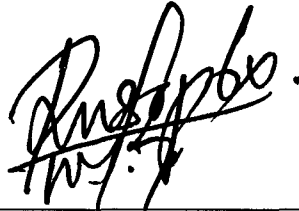
**BACHELOR OF SCIENCE (Hons) PHYSICS
FACULTY OF APPLIED SCIENCES
UNIVERSITI TEKNOLOGI MARA**

MAY 2007

This Final Year Project entitled “**Optimization the Preparation Parameter of Zinc Oxide Nanowires**” was submitted by Fauziah binti Wan Mohd Noor, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons) Physics, in the faculty of Applied Sciences, was approved by



Assoc. Prof. Dr. Saifollah Abdullah
Supervisor
Faculty of Applied Sciences
Universiti Teknologi MARA



Assoc. Prof. Dr. Mohamad Rusop B. Mahmood
Co-Supervisor
Faculty of Applied Sciences
Universiti Teknologi MARA



Dr. Muhd Zu Azhan B. Yahya
Head of Program
B.Sc.(Hons) Physics
Faculty of Applied Sciences
Universiti Teknologi MARA



Prof. Madya Dr. Mohamad Kamal Harun
Dean
Faculty of Applied Sciences
Universiti Teknologi MARA

Date: 15/5/07

ACKNOWLEDGEMENTS

In the name of Allah (s.w.t) The Most Beneficent and The Most Merciful in giving me the strengths, efforts,time and opportunity to accomplished the final project and to come out with this final thesis.First of all, I would like to express my sincere gratitude to my supervisor Assoc. Prof. Dr. Saifollah B. Abdullah, for his continuous guidance, support, valuable advice and comments during this project. He was always there to listen and to give advice. He taught me how to ask questions and express my ideas. He showed me different ways to approach a research problem and the need to be persistent to accomplish any goal. More importantly, he taught me how to work hard and play hard, without his encouragement I could not have finished this thesis.

Special thanks go to my co-supervisor Assoc. Prof. Dr. Mohamad Rusop B. Mahmood for his suggestions, guidance and assistance in helping me to complete this project.

I would like to thank Cik Hartinie Rafie for her cooperation in discussing and sharing information through out this project. I also would like to thank to the Nanotechnology Lab Research Assistance for their cooperation and compromise in using the lab equipments.

Last, but not least, I thank my parents, Wan Mohd Noor B. Haji Musa and Siti Mariam Bt. Haji Othman, for giving me life in the first place, for educating me with aspects from both arts and sciences, for unconditional support and

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ABSTRACT

OPTIMIZATION OF THE PREPARATION PARAMETER OF ZINC OXIDE NANOWIRES

There are many parameters that can be optimized in the preparation parameter of Zinc Oxide nanowires. This study was conducted to optimize the preparation parameter which is deposition temperature of ZnO nanowires on P-Si. The preparations of ZnO nanowires have been synthesis via Thermal Evaporation process. Zinc acetate dehydrate was used as precursor and porous silicon was used as substrate. The samples were prepared in several deposition temperature ranged from 400°C by the increment of 20°C until 600°C. The samples are then characterized by Scanning Electron Microscopy (SEM) and Infrared Spectroscopy (FTIR), the results have shown that the ZnO nanowires seems to be formed when there are high in temperature involved in the synthesis. This is based on the presence of rod-like or individually circle on the substrate surface. These structures were observed in high temperature which is at 600°C for evaporation, where as the nanostructures are seemed like nanoparticles and clustered together in low temperature.