

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

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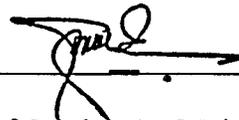
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ABSTRACT

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.