

**PHOTOCATALYTIC DEGRADATION OF BATIK INDUSTRY  
WASTEWATER**

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This Final Year Project Report entitled “**Photocatalytic Degradation of Batik Industry Wastewater**” was submitted by Nor ‘Atiyyah Binti Mohamed @ Abdul Ghani, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, was approved by



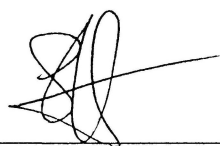
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## **ABSTRACT**

### **PHOTOCATALYTIC DEGRADATION OF BATIK INDUSTRY WASTEWATER**

It has been estimated that an average of 20 tons of wastewater is discharged for each ton of dye production. The effluent from the dyeing process is characterized by strong color, high pH, high temperature, high COD, and low biodegradability. The discharge of batik textile effluents often color receiving waters for miles downstream from the source, creating extensive pollution in the water. This study investigated the feasibility of using photocatalysis for decolourization and COD reduction of batik effluent from batik textile industry. The results obtained show that the optimum pH is pH 4. The average reduction of color and COD achieved are 92.7% and 46.6% respectively. However, the quality of the final effluent still exceeds the discharge limit of Department of Environment (DOE). Thus, further studies should be conducted on photocatalysis to improve the quality of the treated effluent.