

**ELECTROSPUN NANOFIBER FOR SENSING THE EMERGING  
WATER POLLUTANTS: A REVIEW**

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**ELECTROSPUN NANOFIBER FOR SENSING THE EMERGING WATER  
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This Final Year Project Report entitled "Electrospun Nanofiber for Sensing the Emerging Water Pollutants: A Review" was submitted by Najwa Aina binti Dzamri in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Chemistry With Management in the Faculty of Applied Sciences, and was approved by

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## **ABSTRACT**

### **ELECTROSPUN NANOFIBER FOR SENSING THE EMERGING WATER POLLUTANTS: A REVIEW**

The presence of pollutants like chemicals, waste, and pathogens in water bodies have many negative effects, including the destruction of ecosystems, economics, aquatic life and human health. This is due to the presence of various contaminants in the water, such as heavy metals, pathogens and pesticides which are harmful to human health. Contaminated water and inadequate sanitation can facilitate the spread of illness such as cholera, diarrhea, hepatitis A, and typhoid. Researchers have employed analytical methods to identify water contaminants. Several studies have explored the role of electrospun nanofibers for sensing various contaminants such as heavy metals and organic compounds. However, the comprehensive reviews that systemically evaluate their performance, limitations, and potentials for real-world applications is lack in the context of emerging water pollutants. This study aims to explore the most appropriate method and current state in electrospun nanofiber technology for detecting water contaminants. This study also would like to highlight the function of nanofibers as biosensor, the materials used in electrospun nanofibers for the detection of water contaminants, and to evaluate the performance and limitations of existing electrospun nanofiber-based sensors. This study will explore and discuss further intensive prospective of water pollution monitoring using electrospun nanofiber based-sensor.