

# **Integrated Bidirectional IoT Communicator Bio Sorbent Module as an NPCP Absorbent and Real-time Notificator for Mitigating Water Pollution in Central Surabaya**

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## **Abstract**

*Non-polar chemicals remain one of the biggest environmental issues to water bodies, among them, domestic pollutants such as oil are the ones that pose the most harm to the health of Surabayan citizens. Waste oil accumulates in Surabayan gutters, clogging them and contaminating the surrounding soil, posing a threat to Surabayan citizens. IoT remains the most effective method of data collection; IoT sensors specifically help in attaining and sending data to various devices that can be utilized as a warning to prevent further damage. This study aims to counteract these problems by utilising widely available sustainable organic materials and reliable sensors and IoT devices to create a device to alert the responsible parties when oil levels become unacceptable and help mitigate the problem by limited absorption of said oils.*

Keywords: Non-polar Chemical, Domestic Pollutants, Oil, IoT, sensors