



Contribution of sensors on emerging contaminants in agricultural wastewater

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Abstract

Sensors are constructed from materials based on ordered mesoporous carbon that have unique structural and electrochemical properties that work as a useful sensing platform for locating environmental pollutants in wastewater. In agricultural fields, a variety of pollutants, including fertilizers, pesticides, and sediments, affect water resources. These newly discovered pollutants are typically present in surface runoff in agricultural watersheds at readily detectable amounts. These also pose significant risks to the living world, which makes pollutant detection crucial for preserving the safety and quality of water. In-depth monitoring and control of agricultural water quality are made possible by small, reasonably priced sensors that may be used in the field to detect pollutants at their source. The aim and objectives of this study are to evaluate the nature of pollutants, their effects, and the role that sensors play in agricultural wastewater monitoring. In order to investigate their type, impacts, and presence in agricultural water bodies, a targeted literature search was carried out on scientific databases like Google Scholar and journal repository platforms, primarily ScienceDirect and Elsevier. In this review, the occurrence, detection, and monitoring of heavy metals, pesticides, and other pollutants are summarized using contemporary sensors. This research offers a roadmap for other researchers to use sensing methods to monitor and identify pollutants in water bodies by outlining the benefits and drawbacks of various detection techniques.

Keywords: Sensors, Contaminants, Wastewater, Agricultural wastewater, Monitoring

