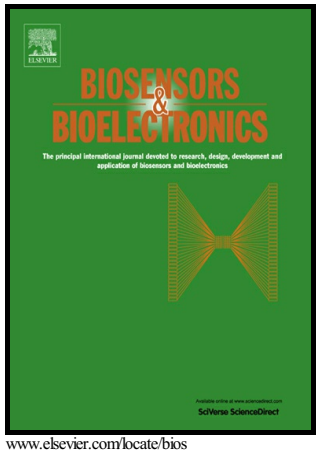

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Progress on nanostructured electrochemical sensors and their recognition elements for detection of mycotoxins: A review

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Abstract

Nanomaterial-embedded sensors have been developed and applied to monitor various targets. Mycotoxins are fungal secondary metabolites that demonstrate carcinogenic, mutagenic, teratogenic, immunotoxic, and estrogenic effects on humans and animals. Consequently, the regulation of foodstuff and feed materials has attracted increasing attention from the scientific community. This review provides an overview of recent developments in electrochemical sensors and biosensors employed for the detection of mycotoxins. Basic aspects of the toxicity of mycotoxins and the implications of their detection are comprehensively discussed. Furthermore, the development of different molecular recognition elements and nanomaterials required for the detection of mycotoxins (such as portable biosensing systems for point-of-care analysis) is

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