Special Issue

Nanomaterial-Based Sensors for Food Safety Analysis

Message from the Guest Editors

Nanomaterial-based sensing platforms represent a significant approach to food safety monitoring, enabling rapid, sensitive, and on-site detection of biological and chemical hazards. The development of these advanced sensors represents a vital strategy for public health through the innovative design, synthesis, and functionalization of nanomaterials that provide unique optical and electrochemical properties, facilitating the precise identification and quantification of hazards including pathogens, toxins, pesticides, heavy metal ions, and so on. This Special Issue highlights advancements that can address the urgent need for onsite, point-of-care testing, and all-in-one capabilities to meet requirements. We aim to showcase a selection of reviews and high-quality original research reports providing significant advances in knowledge from research groups worldwide working on nanomaterial sensors. Additionally, research demonstrating novel sensing mechanisms, device integration, and all-in-one capabilities is a core focus of this Special Issue.

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