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Current Challenges and Breakthroughs in Electrochemical Aptamer-Based Sensors

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Message from the Guest Editors

Over the past decade, the field of electrochemical, aptamer-based sensors has experienced rapid growth due to the advances made both in aptamer selection techniques as well as in their implementation, along with novel nanomaterials, into highly sensitive sensing platforms. Nevertheless, and despite the progress made, a number of factors still limit the widespread adoption of electrochemical aptasensors in the field. In an attempt to address these, smart concepts exploiting the nucleic acid nature of aptamers for signal generation and amplification have been proposed, along with innovative strategies for the detection of 'tough' analytes, such as small molecules and hydrophobic compounds. This Special Issue aims to gather the latest solutions proposed to address challenging issues still faced by electrochemical, aptamer-based sensors that permit detection range tunability, enhance sensor stability over prolonged storage periods, and demonstrate their calibration-free operation.

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Message from the Editor-in-Chief

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