Special Issue

Functional Nucleic Acids in Biosensing: From Detection to Therapeutic Applications

Message from the Guest Editor

The role of nucleic acids extends well beyond their traditional function as genetic material. Functional nucleic acids (FNAs)—such as aptamers, DNAzymes, and ribozymes—have recently been identified for their high affinity and catalytic activity. These chemically stable, easily modifiable molecules are invaluable in biosensing, rapid detection, and therapeutic interventions. This Special Issue highlights the latest advancements in using functional nucleic acids for biosensing applications. Topics include selecting FNAs, designing FNA-based sensors, and their potential in precision medicine. This collection aims to underscore the transformative potential of FNAs in diagnostics and therapy, paving the way for the next generation of biosensing platforms and molecular treatments.

Guest Editor

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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