

Nanomaterials Modified Electrochemical Nucleic Acid Biosensors

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Abstract

The electroactivity of nucleic acids was discovered by Prof. Emil Palecek [1]. Many electrochemical techniques have been then developed for the analysis of nucleic acids as well as DNA interactions [2-6].

Nanomaterials like nanofibers, nanotubes, nanoparticles, graphenes etc. have received a great attention to design nanomaterials enriched electrochemical biosensors that could be implemented into the areas of biomedical engineering and drug discovery.

Electrochemical nucleic acid biosensors based on nanomaterials have become the one of the imperative topics due to the advantages of different nanomaterials as they have unique electronic, optical, and catalytic properties [5,6]. Nanomaterials modified electrochemical nucleic acid biosensors are overviewed herein and discussed with their applications on monitoring the biointeraction of DNA with drugs, or proteins, and also, the detection of sequence-selective nucleic acid hybridization.

References

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