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Carbon Based Nano Bio-sensors for Detecting Metals in Aquatic Environment †

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Abstract: The identification of harmful metal ions in aquatic environments is a global concern since these contaminants can have serious consequences for plants, animals, and humans, as well as ecosystems. A biosensor is an analytical equipment that combines a biological recognition element and a physical transducer to detect biological signals to produce a detectable indication proportionate to the concentration of the analyzed samples being analyzed. The analyte spreads from the fluid to the biosensor's superficial. The analyte responds precisely and competently with the biosensor's biological component—the physiochemical properties of the transducer surface change due to this process. The visual or electric properties of the transducer surface alter due to this. The signal that is detected is an electrical signal. With the help of carbon-based nano-bio sensors, metals from the aquatic environment can easily be detected, which is much simpler, less time-consuming, and less expensive as well.

Keywords: nano bio-sensors; aquatic environment; metals; water.

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Conflicts of Interest

The authors declare no conflict of interest.