

## Enzyme Adsorption, Precipitation and Crosslinking (EAPC) on Intact Carbon Nanotubes for Biofuel Cell Application

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Carbon nanotubes (CNTs) have gathered great attention due to their unique physical, chemical and electrical properties, and their uses in most of biotechnological applications require the dispersion of CNTs in aqueous solution. The most frequently used method for the CNT dispersion is acid treatment, which is tedious and time-consuming. Here, we report the simple dispersion of CNTs with no acid treatment by adding CNTs directly into an enzyme solution. As an extension, we developed a protocol of enzyme immobilization, consisting of enzyme adsorption, precipitation, and crosslinking (EAPC) steps. The EAPC achieved high loading and good stability of glucose oxidase (GOx), and employed to prepare the enzyme anodes for biofuel cells. The EAPC on intact CNTs can be used for various bioelectronics devices by improving enzyme loading and stability together with electron transfer of enzyme electrodes.