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Electrochemical Deposition of Protein- α -conjugated Graphene by Pulse Reverse Technique

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Abstract

A simple electrochemical deposition method for the immobilization of protein- α -conjugated graphene onto an electrode has been developed. A unique one-step electrochemical deposition of cytochrome *c* (Cyt *c*) conjugated with electrochemically reduced graphene oxide (ErGO) onto the surface of glassy carbon electrode (GCE)

without any cross-linkers and the direct electron transfer between Cyt c and the electrode was obtained by the Cyt c/ErGO modified GCE. The characteristics of the ErGO/Cyt c modified GCE were compared with those of an ErGO modified GCE without Cyt c. The direct electron transfer rate constant (k_{et}) was found to be 6.2/s. This approach provides an avenue for the immobilization of various proteins and enzymes with ErGO and could be expanded for diverse biosensor applications.

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if(window._satellite) { _satellite.pageBottom(); }
```

```
var _prum=[[['id','59e8fecb3847311aab7b23c6'],['mark','firstbyte',(new Date()).getTime()]];](function(){var s=document.getElementsByTagName('script')[0],p=document.createElement('script');p.async='async';p.src='//rum-static.pingdom.net/prum.min.js';s.parentNode.insertBefore(p,s);})();
```