Fabrication of Bio-complex composed of Myoglobin/Carbon Nanotube for Electrochemical-signal enhancement

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Bioelectronic devices have been researched for practical application. Bio-memory devices are widely studied to overcome the limitations of silicon-based memory devices. But until now, there exists the critical problem related with detection sensitivity of biomaterials. Therefore, in the present study, bio-complex film composed of myoglobin and carbon nanotubes are fabricated and immobilized on the gold substrate to enhance current signal. The property of bio-complex film was compared to myoglobin mono-layer film by transmission electron microscope, and cyclic voltammetry. From experiment results, the fabricated bio-complex film displayed the current signal enhancement and endurable stability compared to myoglobin mono-layer film.
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