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Immobilization of biomolecules on cysteamine-modified polyaniline film for highly sensitive biosensing

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Abstract:

We present a new cysteamine (CS)-modified polyaniline (PANI) film for highly efficient immobilization of biomolecules in biosensing technology. This electrochemically deposited PANI film treated with CS and glutaraldehyde could be employed as an excellent substrate for biomolecules immobilization. The parameters of PANI growth were optimized to obtain suitable surface morphology of films for biomolecules combination with the help of electron and atomic force microscopy. Cyclic voltammetry (CV) was utilized to illustrate the different electrochemical activities of each modified electrode. Due to the existence of sulfhydryl group and amino group in CS, surface modification with CS was proven to reduce oxidized units on PANI film remarkably, as evidenced

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