



Modification of glassy carbon electrodes by 4-chloromethylphenyl units and d-glucosaminic acid

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Auteur	Gautier, Christelle [1], Ghodbane, Ouassim [2], Wayner, Danial D-M [3], Bélanger, Daniel [4]
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Résumé en anglais	<p>The present work is dealing with the attachment of d-glucosaminic acid (D-GA) on glassy carbon electrode by two different methods. Firstly, the electrode was modified by chloromethylphenyl groups by reduction of 4-chloromethylphenyldiazonium cations followed by the nucleophilic substitution of the chlorine by the amine functionality of D-GA and secondly by the direct immobilization of the amine terminated molecule. The generality of the nucleophilic substitution reaction and the direct immobilization of an amine were also demonstrated with reactants bearing an electroactive ferrocene moiety; 4-nitrophenylferrocene (NfC) and 4-ferrocenylaniline (FcA). The surfaces modified with FcA and NfC were investigated by cyclic voltammetry, and the D-GA modified electrodes were characterized by X-ray photoelectron spectroscopy. A preliminary evaluation of the efficiency of these surface modifiers to prevent protein adsorption was realized by scanning electron microscopy.</p>
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Liens

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