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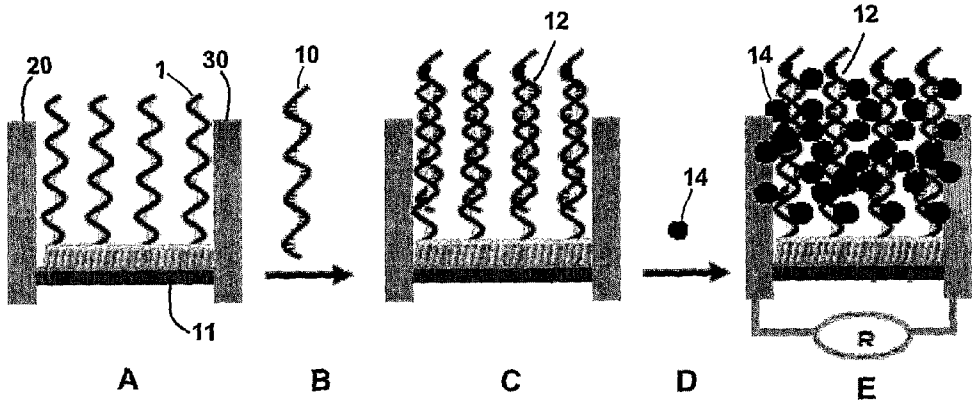
(54) Title: METHOD OF ELECTRICALLY DETECTING A BIOLOGICAL ANALYTE MOLECULE




(57) Abstract: The invention provides a method of electrically detecting a biological analyte molecule by means of a pair of electrodes. The electrodes are arranged at a distance from one another within a sensing zone. A capture molecule, which has an affinity to the analyte molecule and which is capable of forming a complex with the analyte molecule, is immobilised on an immobilisation unit. The immobilisation unit is contacted with a solution suspected to comprise the analyte molecule. The analyte molecule is allowed to form a complex with the capture molecule. The invention also provides a probe defined by a nanoparticulate tag that comprises or consists of electrically conducting matter that is capable of chemically interacting with the analyte molecule. In the method of the invention the electrically conducting nanoparticulate tag is added. Thereby the electrically conducting nanoparticulate tag is allowed to associate to the complex formed between the capture molecule and the analyte molecule. The presence of the analyte molecule is determined based on an electrical characteristic, influenced by the electrically conducting nanoparticulate tag, of a region in the sensing zone.

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