

# Note on Electrochemical Biosensors

Hahn Jong Hoon\*

Professor of Chemistry, Pohang University of Science and Technology

## Introduction

Electrochemical sensors and biosensors have recently found intensive applications in various industries. Nowadays, several analytical instruments utilized in environmental, food, pharmaceutical, or clinical laboratories and additionally most of the industrial point-of-care devices work exploitation chemical sensors or biosensors, as a full or a basic half. aldohexose biosensors used wide in glucometers and pH electrodes square measure the necessary and well-known samples of the chemical science sensors. Day by day, the numbers of sensors or biosensors coming back from the bench of analysis laboratories to the shelf of the industrial markets square measure increasing.

Because of the high demand of the planet market and human interest for having a tool to examine the concentration of species in several samples, easy and quick, in recent years, a tough competition on style and construct of recent sensors and biosensors has occurred among the researchers.

Because of such Associate in Nursing importance and to point out numerous applications of this type of devices, the subject of this special issue was dedicated to chemical science sensors and biosensors. chemical science sensors and biosensors can give blessings of low detection limits, a large linear response vary, and smart stability and reliability.

An chemical science sensing element may be a device that transforms chemical science info into Associate in Nursing analytically helpful signal. chemical science sensors typically composed of 2 basic elements, a

chemical (molecular) recognition system that is that the most vital a part of a sensing element and a chemical science electrical device that may be a device that converts the chemical response into an indication that may be detected by fashionable electrical instrumentations. These 2 components type a operating (or sensing) conductor. A reference conductor and generally a counter conductor also are utilized in electrical measurements. Biosensors square measure chemical sensors within which the popularity system utilizes a chemical mechanism.

Transduction of a biological or chemical signal into Associate in Nursing electrical signal will be done by amperometry, voltammetry, potentiometry, or conductometry.

Next generation of sensing element or biosensors would force appreciable enhancements in sensitivity, property, and accuracy to fulfill the long run desires in diversity of fields. Today, application of various nanoparticles in construction of sensors and biosensors as a modifier causes to approach to the current purpose. The nanoparticles have completely different effects on response of the sensing element or biosensor besides rising their thermal, electrical, and mechanical properties.

The papers chosen for this special issue represent completely different reasonably chemical science sensing, completely different sensing materials, and additionally numerous nanoparticles utilized in determination numerous species. though the papers aren't Associate in Nursing thoroughgoing illustration of all space of chemical science sensing or biosensing, the papers will offer the readers a concept a way to build a sensing element or biosensor for various applications exploitation chemical science ways.

\*Address for Correspondence: Hahn Jong Hoon, Professor of Chemistry, Pohang university of science and Technology, South Korea, E-mail: hahnjong@gmail.com

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