Mini review

Research Progress and Application Prospects of Electrochemical Glucose Sensors

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The detection of glucose plays an important role in the diagnosis, treatment and control of human diseases. The enzyme-based electrochemical sensors for glucose detection have the advantages of high sensitivity, good selectivity and mild conditions. However, the enzyme activity is easily interfered by external conditions, which limits the application of enzyme-based sensors. By contrary, enzyme-free sensors can overcome these shortcomings and achieve continuous glucose monitoring. Recently, various materials have been developed and applied for electrochemical detection of glucose. This review summarized the recent progress and application prospects of enzyme-based and enzyme-free electrochemical glucose sensors.

Keywords: Electrochemical glucose sensor; glucose oxidase; enzyme-free; nanomaterials; wearable sensor

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