

Development of Biosensor Based on Direct Electron Transfer Between Enzyme and Electrode

Hsien-Chang Chang, Song-Sheng Hsiung, Tzong-Jih Sheu

Institute of Biomedical Engineering of National Cheng
Kung University, Tainan, Taiwan, R.O.C

ABSTRACT

Gold or platinum microparticle was electrodeposited on the polyviologen electrode containing oxidase to promote the electron transfer between enzyme and electrode in the absence of mediator. In this study we report the results concerning metal microparticle pretreated diaphorase or glucose oxidase electrodes that could be controlled at - 0.2 V vs. SCE to quantitatively determine the concentration of NADH or glucose, respectively.

Key Words: enzyme electrode, direct electron transfer, metal microparticle electrodeposition, biosensor

智慧藏