

## Amyloid- $\beta$ Impedance Sensor Based on Curcumin-Ni Complex for Alzheimer Disease

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In this work, curcumin-Ni complex was prepared via a simple electrodeposition and applied for Amyloid beta ( $A\beta$ ) detection. The morphology, chemical composition and electrochemical properties of the complex were confirmed by scanning electron microscopy, Fourier transform infrared spectroscopy and cyclic voltammetry, respectively. The complex interacted specially with  $A\beta$ . The surface resistance-change of the complex electrode was confirmed by electrochemical impedance spectroscopy in the presence of  $A\beta$ . The resistance was increased with the increase of  $A\beta$  concentration. The curcumin-Ni complex electrode showed low detection limits as well as linear range response. Hence, the curcumin-Ni complex electrode is a promising candidate for effective electrochemical  $A\beta$  sensor.