# Application of polypyrrole-chitosan layer for detection of Zn (II) and Ni (II) in aqueous solutions using surface plasmon resonance

## Abstract

In this study, a polypyrrole-chitosan layer was applied to detect zinc and nickel ions in aqueous solution using surface plasmon resonance. The resonance angle shift was found to monitor the binding interaction between ions and the polymer film. The polypyrrole-chitosan film was coated on the gold layer with an electrochemical deposition method. The Langmuir model was compared with the Freundlich model to explain the binding. Consequently, the Langmuir model was fitted with experimental data better than the Freundlich equation, and the detection limit was 0.01 ppm.