Short Communication

Polyaniline/MWCNT Nanocomposite as Sensor for Electroanalytical Determination of Phenol in Oil Field Wastewater

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The determination of phenol content in oilfield wastewater is very important in environmental control. In this paper, we present an in situ polyaniline-carbon nanotube (PANI/CNT) nanocomposite for the surface modification of a glassy carbon electrode. The modified sensor has a very sensitive electrochemical response to phenol and can linearly detect the phenol of 10 μM to 0.5 mM with a very low detection limit. Our proposed sensor has also been successfully used for phenol detection of actual samples of oilfield wastewater.

Keywords: Polyaniline; Carbon nanotubes; Electrochemical sensor, Phenol, Oilfield wastewater

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