

عنوان مقاله:

Evaluation of Tap Water Based on Sensor Array and Conducting Nanostructured Polymers

محل انتشار:

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خلاصه مقاله:

A sensor system, adapted to evaluate tap water, was fabricated and tested. Interdigitated gold-coated microelectrodes were covered with various conducting polymers, single or mixed, under several different conditions. Polymer films were laid down by a self-assembly technique and their impedance was analyzed over a range of frequencies from 1Hz to 1MHz. Samples collected from different localities at São Paulo state (Brazil) were used. The results of sensorial system analyzed by Principal Component Analysis had allowed completing discrimination of tap water samples. Good discrimination between the sensors was observed when there was obtained a PCA with different samples, obtaining the total variance (PC1 = 62.03%; PC2 = 37.97%) of the observations. The sensorial system based in global selectivity using interdigitated electrode and nanostructured conducting polymers allowed a statistical discrimination of sample waters of different locations. The future expectations are the upgrading of the system and implementation of a monitoring of tap water systems based nanostructured sensors

کلمات کلیدی:

Nanostructured Conductive Polymer ; Sensorial System; Tap water

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