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Electrochemical Sensor Based on Electropolymerized Dopamine Molecularly Imprinted Film for Tetrabromobisphenol A

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Abstract:

This work reported the simple and direct detection of 3,3',5,5'-tetrabromobisphenol A (TBBPA) by a polydopamine imprinted electrochemical sensor. The imprinted film was directly prepared by electropolymerization of dopamine on a glassy carbon electrode in the presence of template molecule, and then characterized using electrochemical probe of potassium ferricyanide, scanning electron microscopy and atomic force microscopy. It was found that the obtained sensing film greatly enhanced the oxidation signals of TBBPA due to strong accumulation ability. The influences of electropolymerization conditions (e.g. template concentration, scan cycles and scan rates),

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