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Synthesis, characterization of manganese(II) Schiff base complex and its electrocatalytic sensing of hydroquinone

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The Schiff base metal complexes exhibit excellent catalytic activity in various chemical reactions. The manganese(II) Schiff base complexes have good electrochemical redox activity due its various oxidation states. It will be utilized as an electrocatalytic sensor for detection of hydroquinone (HQ). HQ is widely used in several fields, such as dye, photography, pharmaceutical, antioxidant etc. Due to high toxicity to human and low degradation ability in ecological system HQ is considered as a serious environmental pollutant. Based on the environmental factor it is necessity to develop a simple quantification technique for HQ. The Mn^{II} Schiff base complex modified GCE exhibits better electrochemical sensing ability to determine HQ at low detection limits with lower potential than bare GCE.

Keywords: Manganese(II) Schiff base complex, hydroquinone, electrocatalytic sensor, electrochemical polymerization.