

O 66. SYTHESIS AND CHRACTERISATION OF Pd BASED CATALYSTS FOR SENSOR APPLICATION

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ABSTRACT: Hydrogen peroxide(H₂O₂) is one of the most appreciated analytes that is used in various areas such as food processes, bleaching of textiles and paper, pharmaceutical research, clinical laboratory, medical diagnostics, removal of inorganic and organic pollutants from wastewater, antiseptic and cleaning product, minerals processes and biochemistry (Ramazeni et. all, 2017). On account of their tremendous catalytic activity to H₂O₂ and high electrical conductivity in comparison with many other bulk metals, bimetallic catalysts were commonly used for constructing nonenzymatic H₂O₂ sensors. Different techniques have been employed for the determination of H₂O₂. Among them, electrochemical methods have attracted considerable interest due to their high sensitivity, fast response, low-cost and convenient operation (Davila et. all, 2016). In this study, highly active carbon nanotube supported bimetallic Pd based bimetallic catalysts have been synthesized for H₂O₂ sensors. After the preparation of electrodes; amperometric, voltametric and impedance measurements were performed by potentiostat device.

Keywords: Energy, hydrogen, sensor, hydrogen peroxide, bimetallic, catalyst

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