Synthesis of a Flavone-Titanium (IV) Complex and Its Electrocatalytic Activity

Hongfang Lai and Ruisong Wei*

College of Chemistry and Bio-engineering Hechi University, Hechi, Guangxi, 546300, P.R. China

*E-mail: ruisongwei_eric@foxmail.com

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This work reported the synthesis and measurements of a novel complex of primuletin (a flavone of natural origin) and titanium. Through changes in the electron density, the 3HF ligand was found to have the ability to bind to the metal salt through electrochemical experiments. The Ti(IV)-primuletin-multi-walled carbon nanotube (MWCNT)-PE showed an enhanced current response and high reversibility. Additionally, it exhibited desirable electrocatalytic activity in hydroxylamine oxidation. A linear relationship was found between the catalytic current response (measured through amperometry) and the hydroxylamine concentration over a range of 2.5 μ M to 0.4 mM.

Keywords: Primuletin; Flavone-titanium (IV) complex; Flavone; Electrochemical oxidation

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